THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR

WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

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THE SUPERSTITION OF THE PAST.

EVERYTHING which, in the study of the past, can inspire us to emulate its most noble achievements is desirable, and we can,. therefore, hardly overestimate the claims upon us to preserve our national inheritance without needless violence being shown towards it; for great harm was done during the last century through ignorantly conceived restoration, and even from sheer vandalism. But if we have escaped these dangers, we must also beware lest we fall into others, one of which is the making a superstition of the past. Withdrawn from all the strife which the competition for livelihood and opposing aims sets up amid contemporary effort, the past rests in a twilight of its own, tranquil and consoling no doubt, but it is not, therefore, surprising if it exercises over us a strange fascination, so that to wander through some cathedral cloister or ancient Cotswold town leads us to invest the whole surroundings with a beauty and romance wholly undisturbed by the contending currents of our own time. It is a resting-place as well as background for our thoughts, and a dream of beauty to our eyes. All this is well, and to be valued, like the reverence for old age, ennobling to the self-respect of a nation reared on such a tradition. Nor is the influence only direct, for, in the case of architecture particularly, it is surrounded with the rich embroidery which nature and time have contributed to it, so that it is presented to us framed in a golden imagery of its own. We can claim no like advantage for our own time and work, which is moored in no such tranquil harbour and forges itself in the fierce heat of contemporary criticism and the struggle for livelihood. We accept the past in quite another way; it is much easier to be just to it. We may vary in our appreciation, but personal feeling hardly enters to disturb our judgment. Unfortunately, we can claim no such detachment in judging of our own work. It is this fact which should make us careful to sustain an open and generous attitude towards contemporary achievement, in that it is so much more difficult to be just to it. The problems which beset the mediæval craftsman are too far off to agitate us now, and we ought not to form unfavourable comparisons between past and present just because of this, or depreciate modern effort. This self-respect, the need to do justice to our own time, and show tenderness to failure, is its due. And when we hear unfavourable comparisons made between our own and mediæval craftsmanship, are we always just to our own?

Those no doubt preoccupied with the craze for antiques will refuse to believe that we have craftsmen working to-day whose work offers favourable comparison with the best work of the past, but are such eyes open to the virtues of our own time? We think, on the contrary, that we suffer from much ignorant disparagement of contemporary work, which is most unfortunate in its influence. It is very slender evidence of taste to accumulate "old masters," and proclaim that we never purchase modern examples, as though to infer that the former were invariably intrinsically valuable—which they are not; and there is often more snobbery than discernment in cramming our home with "antiques." We recall an instance of the kind in the case of a visitor at the house of a wealthy man, who, admiring a piece of pottery in one of the cabinets, was told by his host that he knew nothing about it—the pottery being there merely because he had told his dealer to fill his shelves! The industrial age no doubt brought many evils in its train, and perhaps the most alarming is that it has led us to doubt ourselves. We flee from the present as some manufacturers flee from their factories, making their home far away from the locality which their occupation has defiled. But while all this may be granted, it would lead us to very false conclusions if we thought it the whole story. That the prevailing evil of too much self-seeking should distort the picture for us is only to be expected, but everyone is not tainted with "commercialism," neither is there any quarrel with commerce rightly conducted and producing necessary things, for we all depend on it, and a too indiscriminate condemnation leads us into error. For the good is with us, too; and in the matter of craftsmanship, were we to exercise a more generous judgment, we should find much of beauty in our own time we had not discovered before. Instead of pursuing the path of the dilletante, a better citizenship admonishes us to seek out and encourage the good in our own time on which we and the future so much depend. We need to discredit the superstition which makes an idol of the past, one we ignorantly worship. Many are familiar with the levity which finds no inconsistency in putting up the vilest window in an ancient church, at the same time professing a most bat-eyed adoration for its ancient features.

A thing is not good because it is old, however, but because it is good; and it is no true respect for the past which leads us to think meanly of ourselves. The architect is, we think, sometimes at fault when, having built a good house for his client, instead of directing him to the good work of our own craftsmen he ransacks the antique shops to furnish it with old pieces. It was stated to us by a rich man that he preferred to spend his money in philanthropic ways because there was so much division as to what was bad or good in modern art, so that he felt his money was more securely spent in giving it to charity. It is no objection to philanthropic enterprise which compels us to criticise so short-sighted a view. Was it not his obligation to distinguish himself between what was good or bad in art? Surely a better citizenship required that he should form a sound judgment. Besides, that desire to be secure, to protect oneself in such a way, has nothing admirable in it, and he ought no longer to get off on such an excuse.

Better men have more real respect for the past, and act more like it, when they live in their own time and through it, instead of turning their eyes away. It is much easier to recognise value when it has been already recognised for us, easy enough to admire what all are admiring. But to form our own independent appreciations and to have the true culture that enables us to form them rightly is not so easy. To seek out and make opportunity for the vital craftsmanship of our own time asks a finer courage and discernment than any included in merely stuffing our house with "antiques"; and it appears to us that the time is coming when this better leadership will be recognised as such and bring us more prestige, because it includes not only truer discernment but better citizenship as well. We need to bring our appreciations nearer to reality, and in doing so we shall perceive the evils of dilletantism and unreality. It is impossible to disregard those symptoms which imperil the prospects for art; the capture of architecture by the salesman, its inevitable disintegration under commercial exploitation, the replacing of vital craftsmanship more and more by standardisation—all this should teach us that a dilletantism preoccupied with the past and living in a vain show of false culture is not the direction through which to cure present evils. For it is example, leadership, that is wanted. Let us not be too ready to blame our time or think meanly of it, for we are all part of it, and the physician must heal himself. The superstition of the past is no alternative for confidence in the present; nor is it a genuine understanding of what the work of the past should mean to us if it only lessens that confidence. For it suggests that we neither understand the past nor ourselves. In the end we best encourage art not through the dead but the living. He who has created opportunity for one good piece of work now is a greater benefactor than if he had filled his house with antiques. It is in this better understanding of ourselves that we shall rightly apportion what we owe to the past, while at the same time perceiving that we owe to our own time much more. In this better atmosphere results will grow, as most things accommodate themselves to good will. A household is not kept together by either distrust or sermons, but by the prevailing large-heartedness and understanding which governs it. We have little use now for those whose admirations reach no further than "period" furniture and antique surroundings, always looking backward and caricaturing the past. From such poor reverence we may well escape. Let us rather be in the van, for true leadership is what really matters. Thus, in the words of a master-poet, we may "Strike up for a new world," leaving the dead past to bury its own dead.

NOTES.

Assessments.

THE recent agitation against the new assessments of houses for income-tax has been fairly met by the concessions the Government has made. The increased allowance for repairs and the reductions in the inhabited house duty were, we think, wise concessions to make. All through the controversy we noted the tendency in the Press to discuss the matter solely from the householder's point of view, in the sense that the additional tax was an added burden to the already heavy taxation. We did not subscribe to the indiscriminate agitation in the belief that the additional tax was unfair; we maintained that it was unreasonable to grant subsidies to encourage the building of houses and then to proceed to neutralise the whole principle by increasing the responsibilities of the building owner. It was wholly a question of whether we wanted revenue or houses; the financial side was merely a matter of book-keeping, as in the end the Government is forced to stimulate the supply of houses.

Taxation.

WE have frequently stated that the principle of taxation and rating of houses is fundamentally wrong. The question of housing is one which directly affects the health and happiness of a nation, yet we place a heavy burden of taxation upon our buildings such as we would not dream of putting upon any other useful commodity. The reply would probably be that it is because houses are so essential that they form the most convenient and equitable basis for taxation purposes. It is obvious that there must be limits, and those who are interested in the social development of a nation may be able to indicate the point when it assumes a *non possumus* attitude towards its obligations and responsibilities and spends its money as it pleases. It may be that the battle of paying our way is quite sufficient for the moment, and that we can listen to discussions upon the proper disposal of our surplus income with academic detachment.

Main Roads into London.

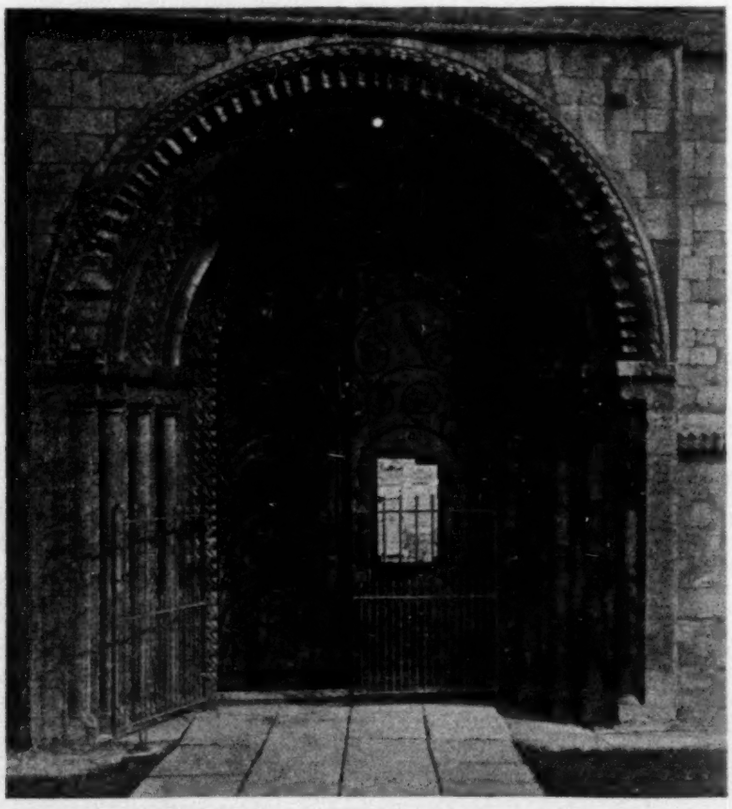
FROM the interesting paper on "London's New Trunk Roads in the Making," by Mr. C. H. Bressey, we note the author's confident belief that Londoners can be relied on to see to it that the greatest city of the world is approached by highways worthy of London's noble history and nobler destiny, though some may remain incomplete for a considerable period. He says: "Even our quick-witted Parisian friends have to tolerate some degree of delay in such matters, and I was consoled to read a month ago that the completion of the Boulevard Haussman, which was begun in 1857, is now being seriously taken in hand." Those who have travelled much by road and experienced the awkwardness and delay in passing through congested traffic like that in Exeter or Croydon, will realise the advantages which are coming from by-pass roads, such as that at Croydon. This enables motorists to swerve from the London-Croydon main road at Thornton Heath, leave Croydon with its trams, 'buses and shopping centres on the left, and follow for four miles the wide new unobstructed highway, saving in distance as well as in speed of travel.

A National War Memorial.

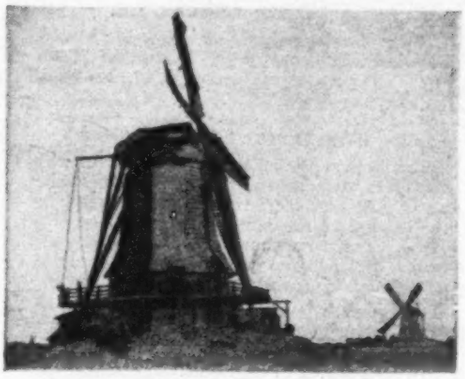
IN regard to the proposal for a national war memorial, to which we made reference last week, we thought the occasion to be commemorated too great to be mixed up with a scheme, however commendable, for providing a new road-bridge across the Thames at Charing Cross. That we should bring the right spirit to such a commemoration, on which perhaps the very existence of Europe in the future depends, appears to us of paramount importance. The Charing Cross scheme has received too large a measure of representative approval to require hoisting on the shoulders of another object, with which it cannot in any way be considered to be closely related. The Honorary Secretary of the London Society, writing in a contemporary, states that the London Society is "in entire sympathy with the suggestion," i.e., of mixing the two together; but we think it more to the advantage of a much-heeded London improvement to rest it on its own merits, and when the occasion comes for a National War Memorial to rest that on its own also. It may be that our own time is better spent in laying the foundations of a better future, out of which such monuments may grow, than in finding them so easy to talk about just now.

The Cardinal's Lodgings.

THE opening to the public of the three rooms in Hampton Court Palace known as "My Lorde Cardinall's Lodgynges," is an event of very considerable interest. Allotted to private occupants by favour of the Crown, but little attention hitherto has been given to their historical and archæological interest. An opportunity, however, occurring when the rooms were lying vacant, the Office of Works made investigations which revealed that the modern battening and papered canvas covering the walls concealed a great quantity of fine oak "linenfold" panelling, the ceilings also displaying the badges and cognisances of the Cardinal himself. Other discoveries have since been made, and the rooms, now in order for public inspection, should



The Western Doorway, Southwell Cathedral.
[This Norman doorway is reputed to have been built about the year 1110.]



"The Three Mills."
By MR. HESKETH HUBBARD, R.O.I., A.R.W.A.
(*See p.* 257.)

prove of great interest to the many thousands of people who visit Hampton Court—but surely the Office of Works has been ill advised in making a charge for admission? In regard to the more complete restoration of the rooms and the renewing of the ceilings, something may be said on both sides. To have the ceilings, as a contemporary suggests, "decked again in their old colours," is not an easy task, unless under very sympathetic treatment, and the matter should be weighed very carefully before tampering with the original work.

Pictures for the National Gallery. THE offer of the sum of £50,000 by Mr. Samuel Courtauld, accepted by the Board of the National Gallery, Millbank, for the purchase of modern foreign pictures which the nation might not otherwise easily acquire, will be welcomed by many people. Purchases, it is said, are to be limited "to the works of a definite list of painters centering round the great Frenchmen of the latter half of the nineteenth century." On the question of the "greatness" of some of these painters opinion is still divided. Much will depend on the choice which is made, as the work of members of this school is often very unequal, and it is pointed out in a contemporary, with some truth, that "it is one thing for the National Gallery to accept certain definite pictures offered or bequeathed by private individuals, and quite another for the Gallery to agree in advance to spend a sum of money on the purchase of unspecified pictures of one or two specified schools." The National Gallery is therefore involved in a somewhat undetermined responsibility, and there is the feeling that the gift would have been better bestowed had not the donor proposed to force his own particular appreciations on the nation. We are not disposed to challenge the claims of these schools to representation—far from it; but the final estimate of the permanent value of the contribution to art of some of these painters is not yet determined.

The Placing of Sculpture. MESSRS. HELMLE & CORBETT, the Bush Building Co.'s architects, are leaving nothing to chance regarding the placing of the figure compositions in the great arch over the main entrance of this new building. They have recently experimented with full-size photographic enlargements of the compositions, which effectively show the pattern or silhouette of the proposals and allow a good judgment to be formed as to what the foreshortenings amount to from the eye-level whilst coming down Kingsway. We do not remember having seen such things attempted in this country before, the usual methods being too often haphazard. Much figure work on our modern buildings is ill-placed and shows a lack of mature thought, especially regarding the level from which it will be viewed. Interest will centre on the result of Messrs. Helmle & Corbett's experiments.

Student-Miner's Success. AT the Welsh National Eisteddfod, held at Mold, the prize for architectural design was awarded to Mr. David J. Williams, a student in the School of Architecture at the Technical College, Cardiff. The subject for the design was an entrance archway in stone with iron gates suitable for a memorial recreation ground. Mr. Williams' success is particularly praiseworthy in that he has studied under considerable disadvantage, inasmuch as during the early part of his course in architecture he continued his regular work in a coal mine.

Hours of Labour. COMING from such a keen social reformer, and one with such well-known sympathies with labour, as Mr. Seebohm Rowntree, some statements in an address he gave at the annual congress of the Royal Sanitary Institute at Hull are of particular interest to the building trade. After expressing the view that a wage sufficient to maintain a reasonable standard of comfort, reasonable hours of work, reasonable security during the whole of life, a reasonable share in determining the conditions of labour, and an interest in the prosperity of the industry, were essentials which every industry should provide for its workers, he said a working week of forty-eight hours had proved to be a satisfactory general standard, and any deviation from it, either up *or down*, should be justified by special circumstances. With the means of production at present in use it can hardly be expected that the benefits which Mr. Rowntree lays down as essential to a contented working-class population can be secured for less than forty-eight hours of work each week.

Trade Union Discord. A STATEMENT by a correspondent of *The Times* last week contains much food for thought. Signing himself "Architect," he instanced an important building work in the North of England on which stone was required from the Midlands. It appears from the letter that the quarry owners in the Midlands were paying their men the local trade union rates, but the operatives on the building declined to handle the stone and threatened to strike unless the quarrymen in the Midlands were paid the northern rate. The dockers have struck against their own leaders, and now apparently one trade union is threatening to strike against another. If the trade of the country is to be hampered by the internal discords of the trade unions as well as by their disagreements with employers, it is difficult to conjecture how the unemployment which is, unfortunately, now o such large proportions can be lessened.

Gateway at Stoneleigh Abbey.
[This gateway, which is still in much the same condition as when built, now gives access to the residence of Lord Leigh, near Kenilworth.]

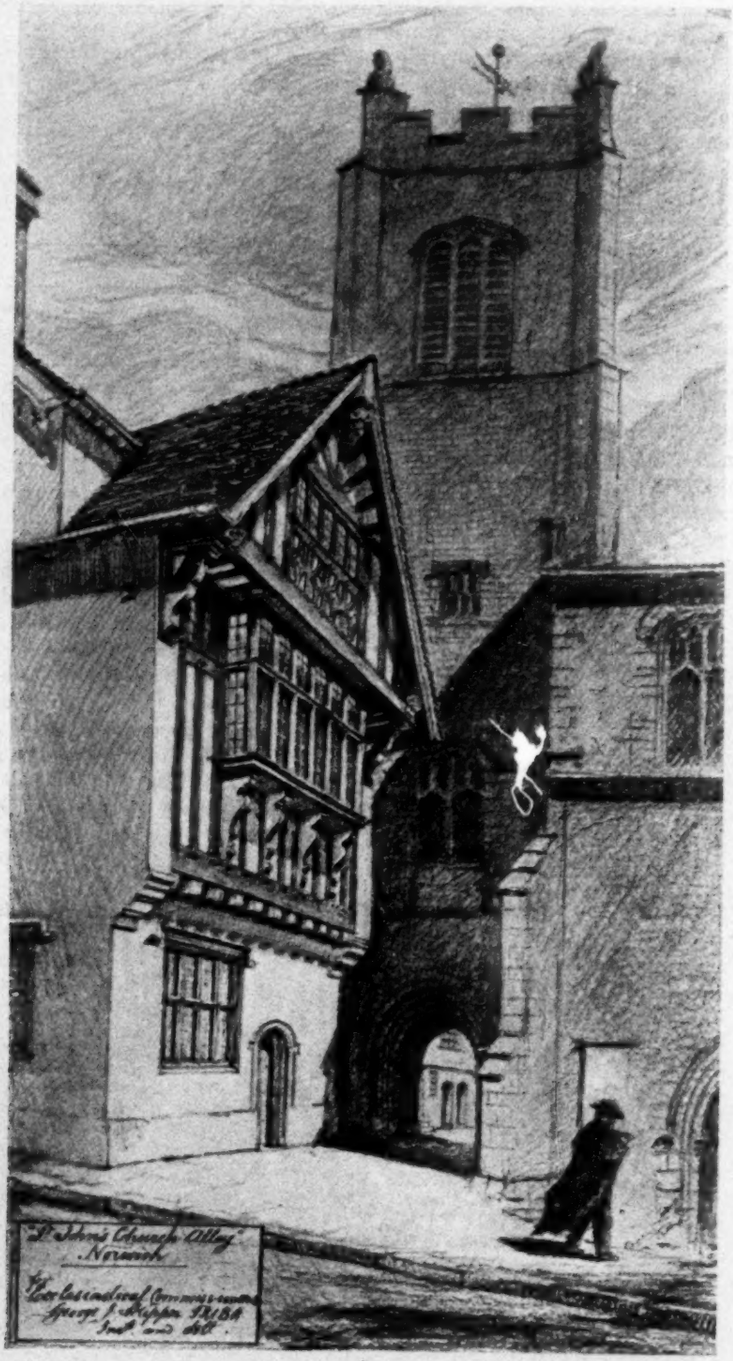
GENERAL NEWS.

Professional Appointment.

Mr. Reed Edwards, surveyor, Haverfordwest, has been appointed Surveyor to Goodwick (Pembroke) U.D.C. There were 28 applicants for the post.

Proposed New Road to London Docks.

The London Chamber of Commerce has decided to urge the Government to consider the question of constructing a new arterial road to the London Docks. The question of the making of the proposed thoroughfare, which it is suggested should run through the heart of London to Tilbury, has already been brought to the notice of the Government, who, it is understood, are reluctant to make a move in the matter because it would involve the demolition of a large number of dwelling houses, particularly of the smaller type, at a time when the housing shortage is so acute.



St. John's Church Alley, Norwich. From a drawing by MR. GEORGE J. SKIPPER, F.R.I.B.A.

[This building was apparently part of a clergy house, attached either to the Duke of Norfolk's palace or the Church whose tower buttresses jut into this building. The small, moulded brick doorway was revealed, as also were the remains of the ground floor window, and two doorways and windows on the street front (not shown in the drawing), where the old stucco was stripped off the walls. These features were not known until the work of repairing the roof—with which the work started—was well advanced. The building had been used as a second-hand furniture stores, and was very dilapidated before it was repaired].

Nos. 210-216, Old-street, E.C.

With reference to our illustrations of 210-216, Old-street, E.C., last week, the quantity surveyor was Mr. George Spencer, F.S.I., F.I.A., of 79, Gresham-street, E.C.2.

New Church at Freshwater.

The Roman Catholic Bishop of Portsmouth last week dedicated a new church at Freshwater, Isle of Wight, erected and endowed by the bequest of the late Mr. Edmund Granville Ward. The new church is designed in the Italian Romanesque style, and is constructed entirely of brickwork specially made in the Isle of Wight.

Canada's Pavilion at Wembley.

There is stated to be keen rivalry among the Dominion representatives who are arranging the construction of their various national buildings in the grounds of the British Empire Exhibition at Wembley. Canadian workmen are making good progress in the construction of the pavilion which will represent that Dominion. The main building, neo-Greek in design, covers an area of 120,000 sq. ft., with a frontage of 415 ft. facing the artificial lake running east to west the full width of the Exhibition grounds.

Taxation of Land Values.

The International Conference on the Taxation of Land Values, at which delegates from fourteen countries were represented, formally began its sittings in the Municipal Buildings, Oxford, this week. Mr. C. E. Crompton, in his presidential address, urged that the tenure of land was the great governing factor which ultimately determined the economic, political, and, consequently, the intellectual and moral condition of a people. The more completely land was monopolised the greater was the insecurity of employment. He advocated that the equal right to land be established and the full fruits of industry be secured to industry; that to attain this end in the simplest, easiest, and most practical way public revenues be obtained by imposing taxation on the value of land apart from improvements due to private enterprise; and that taxation on land value be payable by each person interested in the value of the land and in proportion to his interest. The complete taxation of land value, he said, would provide such public revenue as would render all tariffs and restrictive taxes unnecessary, and would give the world freedom of trade and remove the main causes of international strife.

COMPETITION NEWS.

St. Stephen's Church Hall and Institute, Bush Hill Park, N.

The design placed first in this competition, held recently, was that of Messrs. George Baines & Son, F.R.I.B.A., F.S.Arc., 121, Victoria-street, Westminster, S.W.

Halifax.

FOR THE CORPORATION.—Plans and reports for lay-out of Bull Green site and part of centre of the town adjoining. Premium, £50. Sending-in day, October 1. Banned by R.I.B.A.

Ellesmere-street Wesleyan New Church and Schools, Warrington.

The Committee has extended the date of delivery of plans in this competition from August 8 to August 15. Banned by R.I.B.A.

Other Competitions.

Other competitions still open include the following (the dates given are, first the sending-in date, and second the issue of *The Builder* in which full particulars were given):—Singapore College (Jan. 1, 1924; March 30). Greenwich Baths (Aug. 25; May 4). Hull Art Gallery (Nov. 5; May 4). Mint competition for plaques (Sept. 30; May 25). Birmingham Masonic Temple (Sept. 12; June 22). Colour scheme (Sept. 30; June 29); Memorials to the Missing (Jan. 1, 1924; Aug. 3).

CORRESPONDENCE.

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Tunbridge Wells Pavilion Competition.

Sir,—The present generation of architects who spend laborious days and nights (chiefly nights, *vide* "Jacob Stahl,") on competitive work, appear to be obsessed with the "heavy monumental type" of building. As you have timely observed, they display, in consequence, "a lack of sympathy or imagination." There is no doubt that recent illustrations furnish ample evidence in support of your observations. Long ago I came to the conclusion that the phrase, drummed into me in my early years, viz., "the plan is the thing," was given undue importance. The assessor in the above competition was, apparently, similarly influenced and, even now, cannot resist the temptation of passing it on. He writes: "The plan is economical and well arranged, and there is no wasted space." The plan, of course, is important; but, in my judgment, unless the roofing receives as much attention, such schemes as the one at Tunbridge Wells will continue to merit, relatively, the observations you have passed upon them. What is the cause of the trouble? My submission is that architects in general will not, or cannot, escape from that arrangement of their forefathers (unfortunately pandered to by all the manufacturers of cheap steel trusses), viz., that principals must be 10 or 12 ft. apart. Our predecessors when using wood, were justified; but can the same be said to-day when we have at hand a material capable of performing greater service? (*Note.*—The premiated Tunbridge schemes: Steel trusses, 10 or 12 ft. apart, and covered up. Why not 20 or 25 ft. apart?) Play can then be made with lunettes and light intermediate areas, instead of heavy brickwork, small windows, "unpleasing parapets," and generally uninteresting side elevations. The assessor nearly stumbled on the truth when he said that "the upper windows might be larger, but that is a detail!" Not a word about the disposition of the principals! Increasing the size of the windows, when the principals are approximately 10 ft. apart, will not prevent the "elevations being austere," and certainly will not create the effect suggested as required in your article. What is really necessary is to reduce the points of support, and then sympathy and imagination will get their chance.

Apart from the "monumental" aspect, permit me to direct your attention to the section of the end gallery (Schemes 1 and 2). Why broken backs? What are sight lines for? To remedy this defect in Scheme No. 1 the roofing (flat) will have to be raised 3 to 4 ft. (Missing cube over 3,000 ft.). The seating arrangements (Schemes 1 and 2) may, in the county of Kent, be considered satisfactory; in London or Essex, distinctly, "No. A" licence for music could not be obtained. Scheme 3, in this respect, is excellent.

Walthamstow. J. Williams Dunford.

Sir,—One of the Conditions of the competition for the Tunbridge Wells Pavilion reads:—"The drawings are to be in ink, on double elephant sheets of drawing paper, except the perspective drawing, which is to be on a half double elephant sheet, mounted on strainers, in black line with sectional parts blocked in." Furthermore, answers to competitors' questions made it quite clear that competitors were not permitted to present any of their drawings rendered in wash. Yet the premiums are awarded to those who ignored these conditions, and the conscientious competitor unwittingly handicaps himself in presenting his scheme in line drawings as specified without availing himself of the undoubted advantages of indicating the materials of construction through the medium of colour.

One of the principal objects of the conditions of competitions is presumably to form a common basis for the purpose of comparison of schemes, and one would expect that competitors not complying with such conditions would be disqualified—certainly not awarded the premiums, as in this case.

Again, the Conditions state that the "Perspective view is to be taken from about the point marked 'A' on the block plan." In the first premiated design the perspective is plotted from the air, presumably to obtain a better effect. Surely some explanation is due to the other competitors who complied with the letter of the Conditions.

All premiated designs show a band stand "arranged for either an inside or outside audience," but half of the inside audience have their backs to the band. We fail to see how it can be inferred from the Conditions that a re-arrangement of the seating on each change of weather was contemplated.

As we are competitors who actually received a letter from the promoters of the scheme, in reply to a question, to the effect that "Drawings are not to be coloured," we feel that we are singled out for handicap, and we shall be glad, therefore, if you will kindly give publicity to this protest.

We can only hope that competitions in future will be run on more satisfactory lines.

"Competitors."

Sir,—All hail to your readers who desire to see a drastic revision in the conduct of architectural competitions. After the Tunbridge Wells and Bournemouth failures the R.I.B.A. would be well advised to establish a system which would avoid the giving of prizes for inefficiency.

It is a pity to see architects designing balconies in which 40 per cent. of the seats give no proper view of the stage (a very sad thing for the promoters), and it is surely a scandal that assessors should award premiums for such designs.

Robert Cromie.

London.

Clerks and Artists.

Sir,—Passing by the personal remarks about conjuring with rabbits, &c., and condensing the rest to try to get the meaning clear, I understand Mr. Maxwell Aylwin to say: (1) Style designing is not now in fashion; (2) The free artist is as much out of the scheme of things as the free "Tommy"; (3) The architect should be encouraged to get on with his job.

(1) I should be glad to think so, but I don't; rather I see a tendency to pile on more, or other, style features, and then to pretend that the composition is just "architecture"—much as the Prussian rulers piled up frightfulness and called it culture.

(2) I welcome this clear statement, and think it right to suggest that we should modify our martial-law kind of architectural commands and save some percentage of the "decorations" (?) for free artists.

(3) Is the architect's job structural perfection or "scholarly individuality" in design? I have wished to encourage architects to concentrate on the former view of their job and to get on with it quickly. W. R. Lethaby.

Architecture and Commerce.

Sir,—I have read your article in last week's *Builder* with interest. As a genuine expression of opinion I accept the trend of its thought with an equal mind, but I venture to suggest the following to your readers:—

It is obvious that any state of civilisation must base itself first on the necessities of life, *i.e.*, food, clothing, shelter, for all. The superstructure which is built upon this base can never be anything but a reflection of the desires of the people after the necessities of life have been provided.

Granted that the present order provides every individual with the necessities of life—which it does not—what are we to say is the quality of our desires as reflected in the superstructure? We can only say, and this with perfect justice, that modern world commerce is almost entirely occupied in catering for our lower or corporeal natures. The desires of the body are the lowest known to philosophy. Out of this low general state of desire no general beauty can ever come, and that which is occupied in supplying these lower desires, whether we call it commerce, trade, industry, or what not, can never be whitewashed even by the most sublime genuis ever born.

W. W. Scott-Moncrieff.

London, S.W.

Office of Works Appointments.

Sir,—Under the heading "Office of Works Appointments," which appeared in your issue dated August 3, there was an important slip in the third column. In describing one of the four cases to which the Institution of Professional Civil Servants took strong exception, the article stated that the official in question was going back to a post senior to many posts held by men formerly his "juniors"—the word should have been "seniors." The answer given in the House of Commons on July 31 to Mr. G. Jones (*Hansard*, No. 108, Vol. 167, col. 1294), who asked a further question on the same subject, was very unsatisfactory, for it merely catalogued the qualifications possessed by any moderately qualified assistant architect in the Office of Works. Most of them are much better qualified. There was nothing exceptional in the qualifications of the official whom it was proposed to treat in so exceptional a manner.

H. E. Weaver,
Secretary.

Institution of Professional Civil Servants.

Work for "Unemployment."

Sir,—My reference in your last issue to the possibility of commencing the immediate construction of the connecting link in the Green Park between the northern and southern sections of the suggested mid-metropolitan artery on the score of "unemployment," prompts me to further explanation.

Proposed originally in following up the recommendations of the Royal Commission on London Traffic for the widening of Berkeley-street now that the Devonshire House site is to be built on, further investigation has shown that there are three or four alternatives northwards. Any one of those might be adopted, the question being as regards the most suitable in the problem.

An outer traffic ring would be added to "Regal Circle" with two levels, the lower passing under the Mall and the other outlets, existing or projected. As pointed out last week, apart from the main question, there is the pressing necessity of more direct cross-communication facilities for traffic midway between Whitehall and Hyde Park Corner, a distance of over a mile, which must be conceded sooner or later. In the adoption of an outer ring, which would mean the diversion thereto of all through traffic, the immediate vicinity of the Palace itself would benefit in the quieter atmosphere produced, only traffic for the Palace being admitted.

The predominating sombre traffic surface might then be replaced by the verdant parterre, resplendent with floral beauty, to an enhancement of the aspect in general.

"O.B.I.T."

London.

[Other letters are given on pp. 254, 262 and 269.]

Demand for Corporation Houses.

Thousands of men, women, and children it is reported, went to the Manchester Town Hall last week to apply for 600 houses, the erection of which has just begun. The houses are being built for £425 each, against £1,100 paid for similar houses when prices were higher. Many people walked from the suburbs, and a queue had formed by six o'clock.

THE BANK OF ENGLAND.

HOW IT WAS BUILT, THE MEN WHO WORKED UPON IT, AND WHAT IT COST (1788-1833).

BY ARTHUR T. BOLTON, F.S.A., F.R.I.B.A., *Curator of the Sir John Soane Museum.*

THERE is a well-known story which tells how Louis XIV, on receiving the building accounts of the Palace of Versailles, promptly burnt them, so that no one but himself should ever know what had been the disastrous cost of his great white elephant. Had Sir John Soane, at his resignation on October 16, 1833, presented the 14 small folio volumes of fair copies of "The Tradesmen's bills for the Bank," covering the 45 years of his stewardship, now in his Museum, and stated the total as well under a million, the Directors, having in mind the recent scandal of Buckingham Palace under Nash, might well have been incredulous.

Included in this total are the five houses in Princes-street, known as New Bank Buildings, and the National Debt Redemption Office in the Old Jewry, both now destroyed. The cost of the Bank is apparently nowhere stated, nor would it be possible to say what, as a building, it did cost, for the table of annual outlay, which is given in this article, includes every conceivable item, such as ordinary maintenance charges, down even to window cleaning, lay out and upkeep of the garden, furniture, bedding, curtains, carpets, counters, desks, stools and chairs, beer and medical aid for workmen, even the national illuminations, &c., all of which would never in the ordinary way appear in such a calculation. Soane, as architect to the Bank, becomes the universal provider to the vast establishment, and his red ink deductions pursue every tradesman with the keenness of a Treasury official of the Gladstonian epoch. The Bank accounts are a picture of the period 1788–1833, the cost rises with war freights and King's duties, the Continental blockade troubles Soane with inquiries into the real value of Memel and Dantzic timbers, and, after Waterloo, we see the same fall in values and wages that we anticipate so eagerly to-day. There is a significant Note that "since 1804 old stone, old bricks, &c., have been used."

There was no organising contractor who built the Bank. It was the work of a group of tradesmen controlled by the architect and his clerk of works. This method of building secured the high level of workmanship to which the durability of the Bank is a witness. It does not lend itself to an exact determination now of what was done in a particular year, because it is only rarely that the place, or the work, is defined. It was obvious at the time, but the identification now would probably be beyond the powers of the most experienced surveyor. It was a peculiarity of Soane, as an architect, to act as his own surveyor, and he prided himself on making no extra charge. He is simply paid the usual five per cent. on the half-yearly totals, except on a very few occasions, when some very special service is rendered, as, for instance, the laying out of the Princes-street and Lothbury extensions, with all the Committee work in Parliament, in the City, and the negotiations with the Grocers' Company, &c., involved, on which occasion he makes a special charge of £200 for invaluable services. The accounts are made up quarterly by himself, abstracted in two columns, of one quarter each, giving the half-yearly total, and with this he renders his statement of charges as follows:—

"The Honble. Governor, Deputy Governor, and Directors of the Bank of England.

To John Soane.

(from Lady Day to Michaelmas 1791.)

Commission on the Bills for work done as per abstract . . . . amounting to £5,471 3s. 6d. at 5 pr. cent.	£273	11	2
Clerk of the Works, 161 days from the 25th March, 1791, to 29 September, 1791, included	40	5	0
	£313	16	2"

The form does not vary, as the last, in 1832, is made out in exactly the same way. The date of the last payment made to him was April, 1834, being for the account to October 16, 1833, the date of his resignation. The clerk of works was, I think, the same all through, Walter Payne. He was at first paid £78 a year, £100 in 1800, and £165 from 1812 onwards. In Sir John Soane's will (May, 1833) £150 a year is left to "Walter Payne, my present Clerk of Works at the Bank, and his wife, for their lives." He is also, with five others of the office, to share the stock of red wines and spirits in Soane's cellars at the time of his death. The following list gives the names of those worthy to be recorded for their achievements:—

Schedule of the principal tradesmen* employed on the Bank from 1788 to 1833:—

Masons.—Henry Earrell and Jas. Nelson, both from 1788; Nelson and Grundy, 1807; Thos. Grundy, from 1810.

Bricklayer.—Thos. Poynder, from 1788.

Carpenters.—Wm. Collcott and James Swinton, both from 1788; Swinton and Martyr, Richard Martyr.

Plasterers.—Thos. Palmer, John Bayley (d. 1812).

Painter.—Hannah Rowe, from 1788; John Crace (1794) and Wm. Watson (1810).

Glazier.—James Curtis, from 1788.

Coppersmith.—Samuel Rehe.

Stove-makers.—Alex. Brodie, Jas. Lukin & Co., Aug. Ramellie (1793, serpent in Bank Stock office cellar), John Skidmore, Macnaugten & Co.

Iron sash-makers.—Jas. Keir & Co., from 1788; Underwood & Co.

Smith.—Thos. Russell, from 1788.

Plumbers.—Sam. Draper, from 1788; Lancelot Burton, and Ann Draper.

Clocks and Dials.—John Thwaites and James Drury.

Cabinetmakers.—Francis Gilding and John Robins (1804).

Upholsterers.—Kent & Sons, and David Bruce.

Lamps (patent) and illuminations.—Fossick & Mathews (1812).

Safes.—Rowley, Culter and Machell.

Hollow Cones for vaults.—Joseph Peters (1817). No name is given for the earlier supplies of these cones.

Hot water apparatus.—A. M. Perkins, 1833 (Court room).

Gas.—Thos. Rawling, 1830 (front of Bank).

Garden.—1824, J. Allport.

These are all the names of highly competent craftsmen, who executed the modelling and decorative work, carving and reliefs from the architect's designs and instructions. Except for Coade & Sealey, who modelled and made the statues and cariatides, there is no mention of any sculptor as such. The name of Thos. Banks, R.A., only occurs once in 1789, for a mantelpiece,† though we know that he modelled the reliefs of "Night" and "Morning" in the Lothbury Court. For the latter only £200 appears in the mason's bill, which looks as if the masons cut them direct from the full size cast now in the Sir John Soane Museum. Even the pendentive cupids of the cupola of the National Debt Redemption Office in the Old Jewry, which had been thought of as possibly Westmacott's work, are merely charged in the bill of Thos. Palmer, the plasterer, in 1819, as "four ornaments of foliage at springing of dome, 2 ft. 0 in. high × 1 ft. 0 in. wide, four ditto worked by hand, 4 ft. 10 in. × 2 ft. 4 in., and four figures with torches, £5 5s. 0d. each = £21 0s. 0d. Modelling enriched friezes, flowers, soffites, &c., £20 15s. 0d."

Henry Provis, one of Soane's office,‡ is paid £58 16s. 0d. in 1796–7, for "Sundry models for use of workmen, rotunda, 4 per cent. office, and façade to Lothbury." These

*Some names run right through, others have successors, as shown by the second and third names given.

†Statuary marble chimney-piece. Mr. Newland's apartment, £94 19s. 3d. Angular columns with twisted flutes. Tablet laurel festoons on friezes.

‡H. Provis, an outdoor clerk, from 1791. In 1802 he was completing his supervisory work at Tyringham, Bucks., built 1794–1802.

were probably some of the wooden models, now in the Sir John Soane Museum. The plasterers made a model of the façade of the Bank in 1825; the coppersmith, in May, 1792, makes a brass model of the roof of the Bank Stock Office, with iron rafters, pillars, fretwork, &c., for £18 0s. 0d. The capitals of the main order of the exterior are in the mason's bill, in 1795, as "James Nelson, mason, four capitals carved, £31 10s. 0d. = £126 0s 0d. Paid B. Grant for modelling a capital, £12 10s. 0d." "Paid Pelligrini* for small do., £1 1s. 0d." The same two names occur, in 1802, as "J. Pullinger, attending on workmen, £8 8s. 6d., and Benjamin Grant, modelling and casting plaister ornaments at different times, £7 1s. 0d." In 1804 these capitals were executed at £26 each, the pilaster caps at £8, the characteristic Soane scrolls at £11 11s. 0d., and the caduceus in panels, £6 each. There is a charge this year for a carver, "114 days at 6s.," comparing with masons 4s. 10d., and labourers, 2s. 11d. a day. In 1822 the column caps had fallen to £24 each. Portland stone was then 4s. 9d. per ft. cube, inclusive of duty.

A curious entry in 1802 shows that Soane made a special journey to Fonthill (Wyatt's masterpiece for Beckford), "to see doors, chimneypieces, &c., that might be used, £18 14s. 6d." It is not very probable that any were used. The following has a special interest, as it shows that the figures in the great lanterns were not from stock but specially designed :—

Ornamental Stone Manufactory. E. Coade.	£	s.	d.
1795. Modelling 12 statues for the dome of rotunda, 15 gns...	189	0	0
Masons and labourers setting same, cartage	11	2	0
	200	2	0
1799. No. 12 statues as Cariatides for transfer office, 20 gns...	252	0	0

For the Lothbury Court there are entries as follows :—

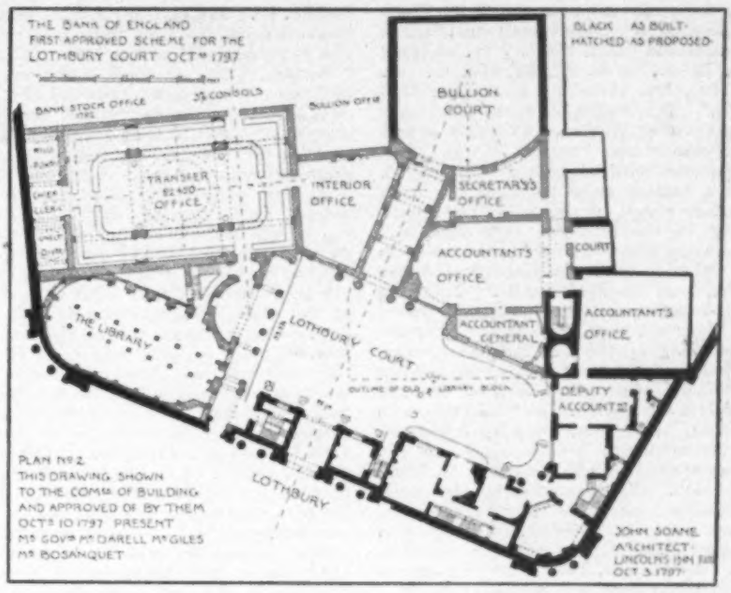
	£	s.	d.
1801. June 19. Making four vases ornamented flowers and flutes	34	16	0
Expenses modelling same ..	12	12	0
Fixing	3	18	6
July, same, repeat order ..			
August 4. Making model statue, Europa	14	0	0
Modelling statue from above..	88	10	0
Same for Asia, Africa and America			
(Total for Lothbury Court, including modeller attending several days, and directing fixing the work, £514 19s. 6d.)			

For the Consols Office of 1818–23, however, in place of Coade, we read : "Thomas Grundy, mason, 16 Cariatides at £21 each, with caps at £4 4s. 0d., as agreement," £403 ; and T. Palmer & Sons, plasterers, pendentive medallions at £10 each, plus £1 for the frame, and the caduceus below the same, 4 ft. 10 in. high, £4 each. It is curious and interesting to find in these building accounts the following items :—

1808. Joseph Nollekens, sculptor, marble busts of "The late Wm. Pitt, £105, and C. J. Fox, £126." Also in 1812, P. Turnerelli, "A large bust of His Majesty in marble, £126 ; do. of King William III, £126."

The history of the Bank building, from the account book point of view, would appear to be that from 1788 to 1792 Soane, besides ordinary maintenance works, was making some minor alterations and additions, such as vaults under Bullion Office, &c., apartment for Mr. Newland, new barracks, &c., all works in the rear of the older buildings of Sampson and Taylor. In 1792 begins the first characteristic work, the reconstruction of one of Taylor's halls, as the new fireproof vaulted "Bank Stock Office." It is evident that this work was purely internal. Taylor's screen wall façade remained until 1823. John Bayley constructed the remarkable vaulting, as an account, dated May 1—December 22, 1792, shows :—

*Possibly J. Pullinger, as spelt later.



				£	s.	d.
Bricklayers	695 days	3s. 4d.	..	133	7	0
Plasterers ..	783 „	3s. 10d.		150	4	4
Labourers ..	1,274 „	2s. 4d.	..	148	13	3
Boys ..	319 „	1s. 2d.	..	18	12	2
Paving bricks	55,815	4s. 4d. per 100		120	0	0
Stock bricks	25,500	4s. 0d.	„	51	0	0
Cones ..	27,650	10s. 6d.	„	145	3	3
Plain tiles ..	4,350	3s. 0d.	„	6	10	6
Ten inch .. s	3,300	15s. 0d.	„	24	15	0
Foot do. ..	100			1	14	0
Plaister ..	3 bags	1s. 6d.	..	0	4	6
Hods composition ..	6,053	2s. 0d.	..	608	10	0
12 Loads scaffolding carted to and from Bank ..	..	6s. 0d.	..	3	12	0
(— J. S., deduction £2 6s. 0d.)				1,412	6	0

The cones mentioned are tapering hollow blocks of terra-cotta, introduced for lightness and strength by Sir John Soane, as had been done in Byzantine times at Ravenna. Two sample ones are preserved in his museum. Immense numbers were used at various times for the vaults and domes of the Bank, and apparently the great segment vault of the Accountants' Hall is so constructed. The centering for the Bank Stock Office is charged in the third quarter of 1792, £146 0s. 0d. Thomas Palmer, the plasterer, has an account of £116 for finishing the Bank Stock Office, as "362 feet super roughing in, floating and doing in trowelled finish with stone lime the large circular soffites at 3d., £4 10s. 6d," &c.

"Ditto soffites over pilasters at 4d. spherical spandrils, do., circular mouldings on soffites, 7 in. girt, 6d., 2 in. sunk fillets, 2d., &c." The ornaments are charged as, "four raffle leaf flowers, 3 in. imbost, with lion's head in centre spandrils, 6 in. imbost, £8 0s. 0d. ; eight raffle flowers, Medusa's head in centre, 35s., £14 0s. 0d. ; four foliage flowers, 2 ft. 0 in. diameter, 2½ imbost, 30s., £6 0s. 0d. ; 46 flowers, 3 in. imbost, 1 ft. 0 in. diameter, 7s. 6d., £17 5s. 0d." These ornaments can be seen in the photograph of the interior. The above are very good samples of the bills throughout. There is a special charge in 1793 for "ornamental painting on ceiling in Bank Stock Office, two men, three weeks each, £2 2s. 0d., £25 0s. 0d.," showing that the variety of colours still to be seen in the older offices is a tradition of the original. It might be expected to be so, in continuation of the Adam idea of Soane's youth. The change to "Yellow stone colour" comes in with the growing strength of the Greek revival, about 1800–2, when the great Princes-street extension of the Bank was undertaken. The earlier Soane work had probably strong colour, as we see it in his own house, as a good deal of scarlet appears in the bills. John Crace is employed in 1794, and the following colours are mentioned : Dead white, purple brown, veined marble, and sunk fillets, cut and shadowed, grain satin wood, gilt fillets and sunk do., black and varnished do., £17 15s. 3d. Also grey white, lilac, fawn colours, scarlet margin 1½ in., fillets in fine yellow, also in black, fine scarlet in panels varnished, Vitruvian scroll in fawn colour, 3 in. fawn margin on ceiling, &c.

In 1800 there is mention of "glazing pilasters with blue and yellow coloured glass, 144 strips at 1s. 10d., 24 small do. 1s. 3d., 72 slips of yellow glass 2s. 6d., and 96 small do. 1d. ;" and in 1807 we get a note of the cost of stained glass (flashed glass, not pot metal) as yellow 5s. per ft. super, orange 8s., blue 5s. 9d. per lb. (analysed as "about 8s. 3d. a foot, about 10 in. × 10 in. = 1 lb."), purple and green same price, and red 14s. per ft. There is no doubt that Soane's idea was to mitigate the cold effect of white light on plain stone-coloured walls, as Robert Adam had first used tints on his ceilings in order to reduce the glare of white plaster. The following describes and prices the remarkable lanterns with which Soane lit his novel interiors :—

Bank Stock Office (old building).

Coppersmith, Saml. Rehe.

	£	s.	d.
1792. May 19. A model of brass for the roof with iron rafters, pillars and fretwork, &c., over the above office ..	18	0	0
December 20. 1,032 super. tinned copper covering over lantern light, 18 oz. to ft., 2s.	103	4	0
12 iron bars dovetailed and let into iron rafters, 6s... ..	3	12	0
40 iron braces, three holes in each for rivets, 1s. 8d. ..	3	6	8
18 copper screws and nutts to skirting to prevent too much air, 1s. 4d.	1	4	0
24 large copper screws to the iron rim, 1s. 2d.	1	8	0
24 straps and keys with copper pins to secure the capping, 2s. 6d.	3	0	0
96 large iron braces and stays in frieze, 1s. 6d.	7	4	0
Copper rivets, 12 doz., 1s. 8d., 40 doz. at 1s. 3d.	3	8	6
Extra labour in fitting and rivetting the iron braces to the friezes, the holdfasts to the rafters and pilasters, drilling, &c., 7 men, 17 days, 5d.	19	5	0
120 lb. lead to fix copper holdfasts on pilasters and labour running and melting, 3d...	1	10	0
	165	2	10

Saml. Rehe also supplies the Bank Stock Office finishings as "brass beaded mouldings to the counters and doors, 108 ft. 7 in., weighing 421 lbs. 13 oz., at 5s. 6d. lb., £116 0s. 0d., with labour, &c., 11th May to 5 June, £152 total bill." The heating of these great halls was another great problem. Evidently at first Soane continued the "serpent stoves" that Adam had used in his rotundas, as "April, 1793, erecting a heating stove to warm the Bank Stock office placed in the cellar underneath according to the estimate, £138 18s. 0d." "7 square cast-iron boxes fixed in the thickness of the arches to clean the revolutions of the flues, &c., total bill, £159 10s. 0d." Following on this, however, independent stoves, placed against the main piers, were used. After the Bank Stock Office, the next important undertaking was the reconstruction of the old rotunda of Sir Robert Taylor with a fireproof dome, in place of lath and plaster. As "Midsummer to Michaelmas, 1795, Thos. Poynder, bricklayer, 3,493 cube brickwork in dome, done with kiln burnt bricks and tiles with stone lime, 1s. 10½d., £327 9s. 4½d." The centering for the dome, by Jas. Swinton and Richard Martyr, carpenters, cost, say, £400, as "2,662 ft. super spherical cradling for dome in 128 pieces, close boarded, at 10d. 987 ft. 6 in. cube rough fir frame at 2s. 3d., circular curb and purlins at 4s. 6d.," &c.

The Portland stone at this time cost 2s. 4d. and extra freight 4d., and duty 6d., 3s. 2d. ft. cube. As regards the plaster finish of the rotunda, there is a bill of John Bayley "September 30–October 27, 1795 (exclusive of contracts), 1,183 super ft. plain face in composition, 9d. Plain mouldings, 2s.," and the wages charged are: Men, 3s. 6d.; ornaments do, 7s.; labourers 2s. 4d.; boys, 1s. 2d. per day. For warming the rotunda in October, 1795, "two very large patent philosophic rarefying stoves, extra strong metal with double back and cast feet" were installed, and Soane reduces both of them from £20 to £17 10s. 0d. in price. It is to be hoped that they were more successful than such things usually proved to be in heating such a vast space.

A clock maker, James Drury, supplies a great clock with a 4 ft. dial, for £101 10s. 0d., but the remorseless Soane cuts it down to £80. It does not appear where the clock is to be placed, but probably it was for this rotunda which was, of course, at this period the Stock Exchange, being entered from Bartholomew-lane, through the still existing vestibule of Sir Robert Taylor's design.§ The circular lantern on the top of the rotunda was supplied by James Keir & Co., October, 1795, for £135 5s. 0d., as "frames, £40 10s. 0d.; sashes, £50 19s. 8d.; extra casements to open, £15; and glazing, £28 16s. 4d." The fanlights in the arches below cost £18, as "January, 1795, six large semi-circular iron fanlights with wainscot frames and iron bottom rail, to sketch received, glazed and painted complete." John Thwaites, October 5, 1795, supplied for £36 0s. 0d. "A wind dial to show horizontal in centre of dome of rotunda, 5 ft. 0 in. copper dial plate, black with gilt letters, &c.", showing that originally the top of the lantern of the rotunda was not all of glass. In 1792 the purchase of Haines Estate in Princes-street had made possible the large extension that followed at the rear of the Bank. Soane was paid £70, 1 per cent. for his services in this acquisition. While this was going on, piles were being driven for the outer wall, as "2,888 cube rough fir and labour in piles drove in foundation in Lothbury, 2s.," and "Alex. Goudge, paviors, delivered Princes-street for foundation, July to November, 1795, 100 tons picked large size pebbles delivered at 16s., £80 0s. 0d." There can be no doubt that the new façade wall in Lothbury, forming the back enclosure of the Bank site, as at this time extended, was erected at once for a protection, leaving the final determination of the offices to be built behind it for future consideration.* It would appear that the internal outline of the Lothbury Court and the group of buildings adjacent, *i.e.*, the Residents' Court, &c., was only settled at the end of 1797. Soane, no doubt, had a general idea in his mind,† but it is quite clear that no final plan had been arrived at and settled with the Committee of Building until October 10, 1797.‡ It is astonishing, but true, that, apart from Sir John Soane's genius for grasping an occasion, the Lothbury Court, instead of being the realisation of a great Court, as dreamed of by Palladio, might have been a mere back yard for the bullion and stationery vans to draw into. The Lothbury side of the Court, the first built, illustrates this, and it will be seen on the plan of 1797 that the screen of columns across the Residents' Court, though a key idea of the design, has evidently been sketched in afterwards. It is more than likely that the Committee never passed it. The design, as in the case of St. Paul's, grew in the course of execution. The absence of what Soane calls a "closed contract" suited the fluid character of his design, which achieves its end by a constant scrapping of ideas, felt to be capable of re-statement in a better form. The new‖ Library (which replaced the old, pulled down to facilitate the new extension) and the Transfer Office were in hand, 1798–9. The reconstruction of another of the offices, built by Sir Robert Taylor, in lath and plaster with wood columns, was effected by John Bayley, 1796, whose account is: "Building the arches and dome in the late 4 per cent. Consols Office with paving bricks and cones set in composition, according to the plans and sections as directed, and finishing in compo all the external parts, and a rough coat on all the internal parts, as per contract, £1,683." And a letter is copied into the book, "John Soane to the Governor," "the work of the 4 per cent. Office being nearly completed" to pay £1,000, June 23, 1796. James Swinton and Richard Martyr, carpenters, charge for the centering for the vaults of this office, £155 10s. 10d., the items being as for example, "13 squares, 38 ft., extra strong centering to segment arches, at 18s., £12 0s. 0d., &c."

The original flat copper tops of the lantern light cost £101 17s. 11d., and the plasterer's account (1796), including ornaments, panels and mouldings, is £194 7s. 2d. Part of the inside scaffold in the office fell, as in the last quarter of 1796 Surgeon Lewis Lease receives £16 15s. 0d. for attending accidents at the Bank," and a publican, Free, is paid £26 7s. 9d. for beer for the workmen, and in 1800 appears an item "Amount of cash paid the men who fell with the scaffold in the 3 per cent. Consol Office." In 1804 the famous Governor's Court, one of the most original features of the interior of the Bank, was in hand, James Nelson, mason, as "Last quarter, 1804:—

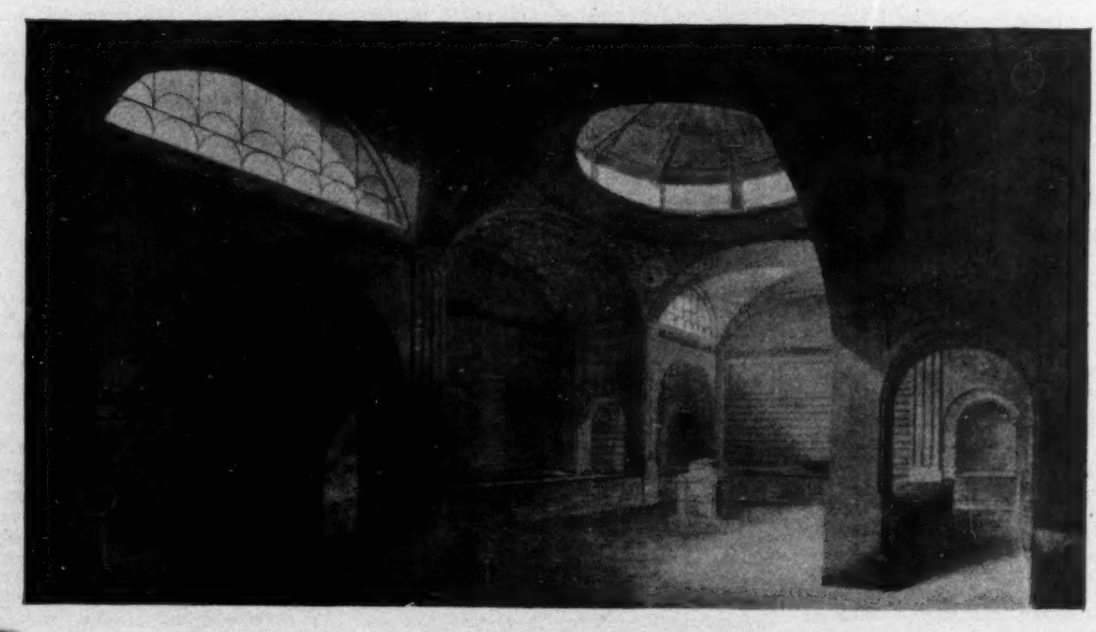
	£	s.	d.
"99 ft. super. rustic work face of arches in Court, 5s.	24	15	0
14 ft. 6 in. do. do. in soffite, 6s.	4	7	6
{No. 1. ¾ antique pilaster cap ..	18	0	0
„ 2. Do. do. column cap ..	36	0	0
„ 2. ¾ do. do. do. ..	39	0	0"

*S.N.B. "Feb. 27, 1796. Mr. Meyer finished drawings of Bank Gateway." Oct. 30, "Settled finishing rooms over gateway." (Soane's office at the Bank over the Lothbury entrance.)

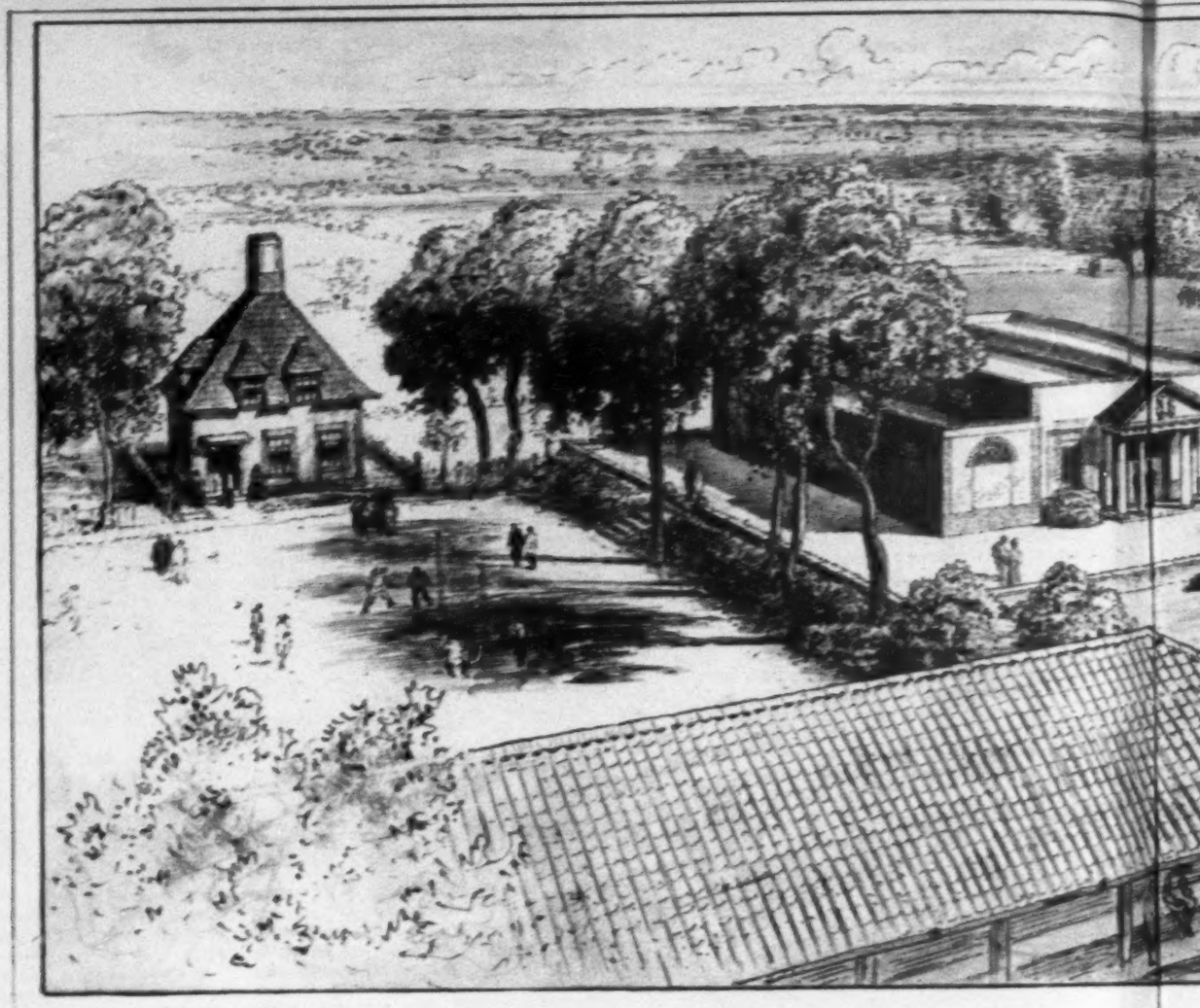
†Soane was making plans January 14–15, 1797, for this new vacant land.

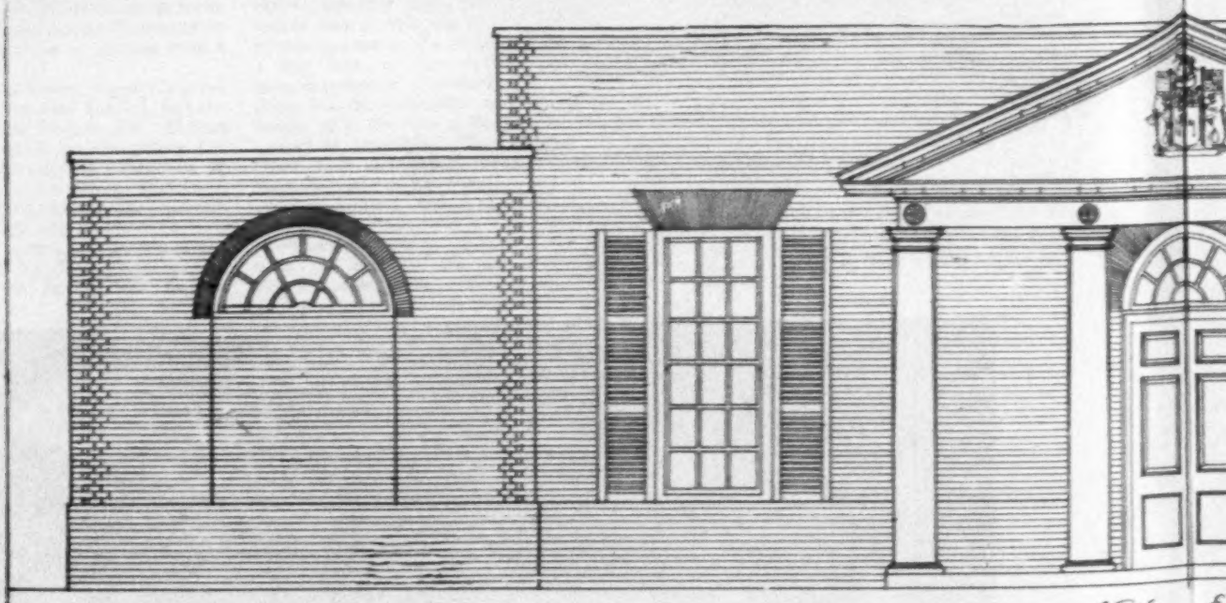
‡ "September 19, 1797. Presented two plans and two small models for the improvements adopted by the Committee of the Treasury to be recommended to the General Court of Directors." At this meeting one of the Committee appears to have indulged in some possibly harsh criticism of the Architect, but the Memo. is written in such an agitated hand as to be indecipherable. Probably it was a reflection of the unfair external attacks made against Soane at this time, 1796–7.

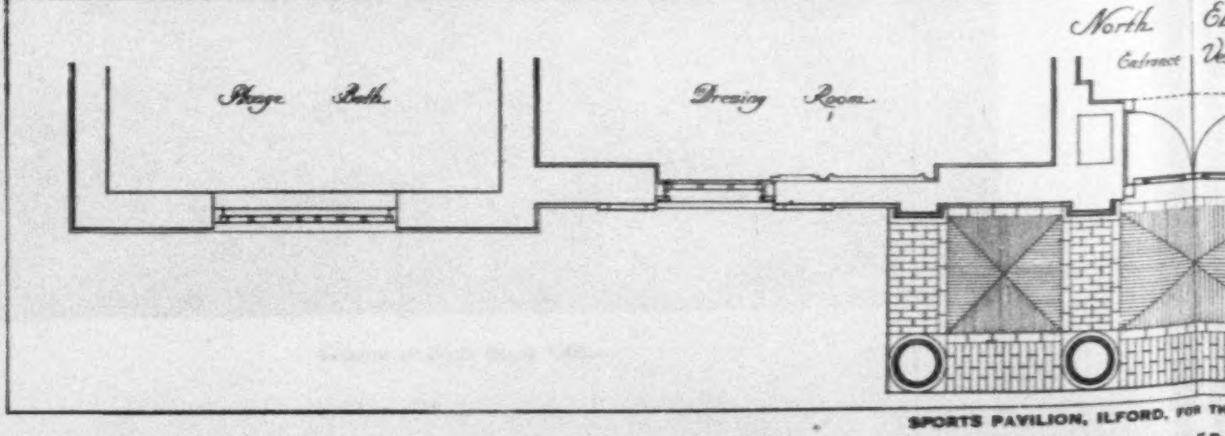
§ S.N.B. "July 19, 1796. Settled about finishings to the 4 per cent. office. Sept. 12, Do. 4 per cent. office to be finished by Christmas." The same month Soane is engaged on plans for the new Consols 3 per cent. office.



Interior of Bank Stock Office.







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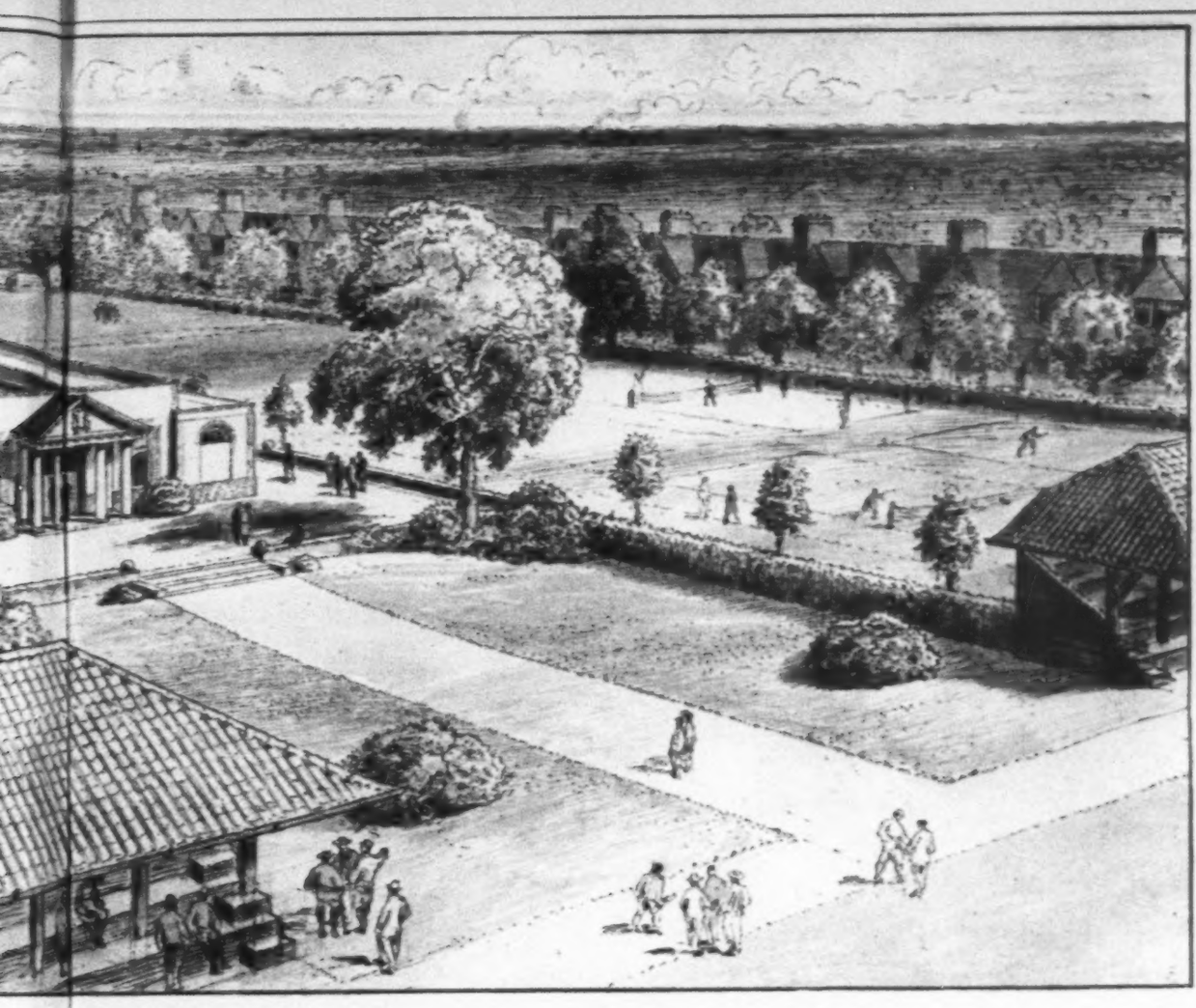
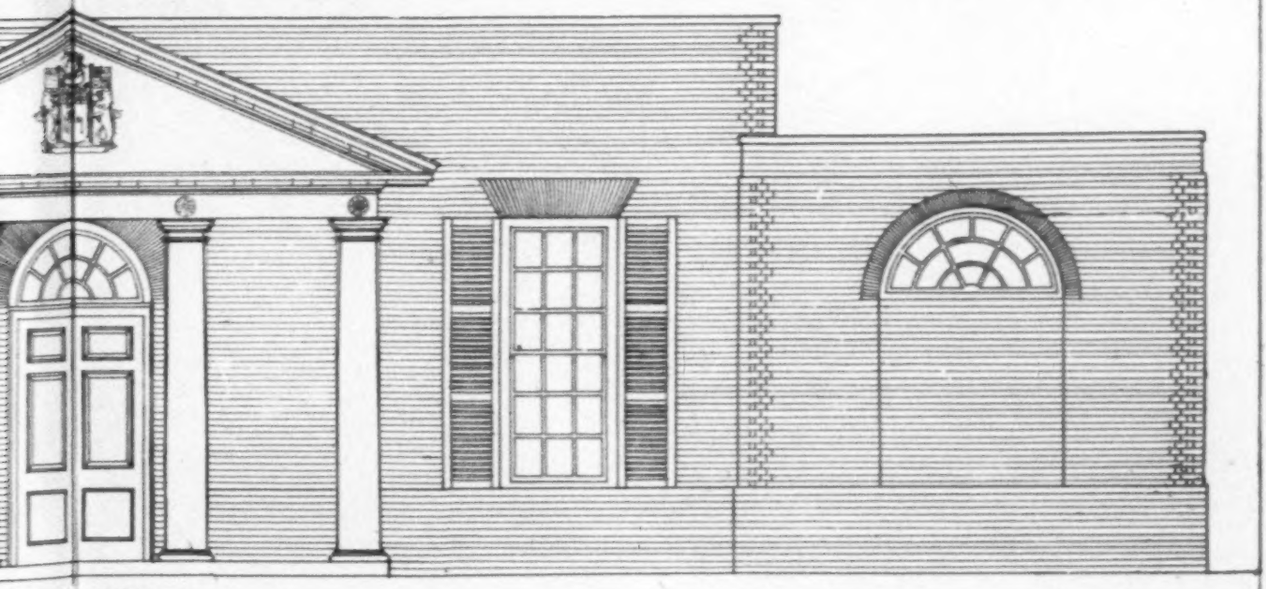
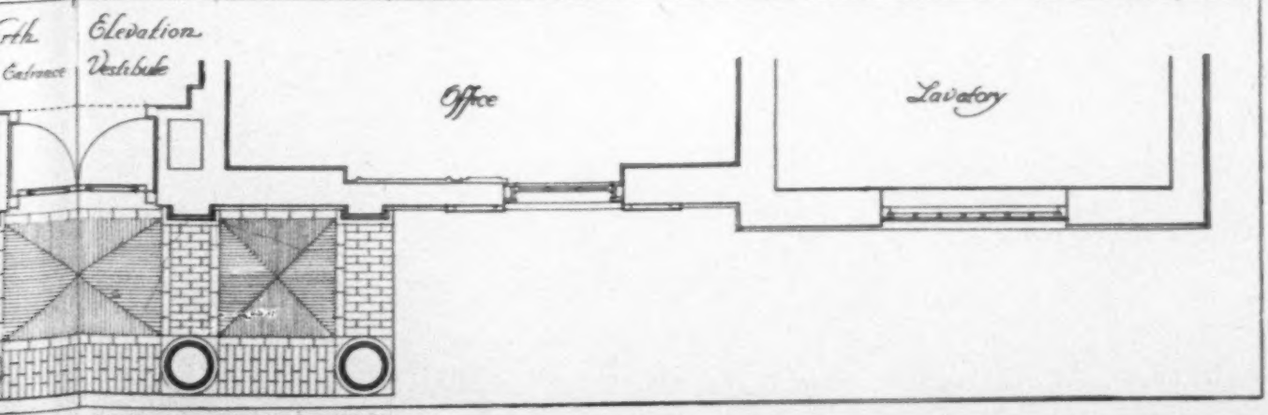
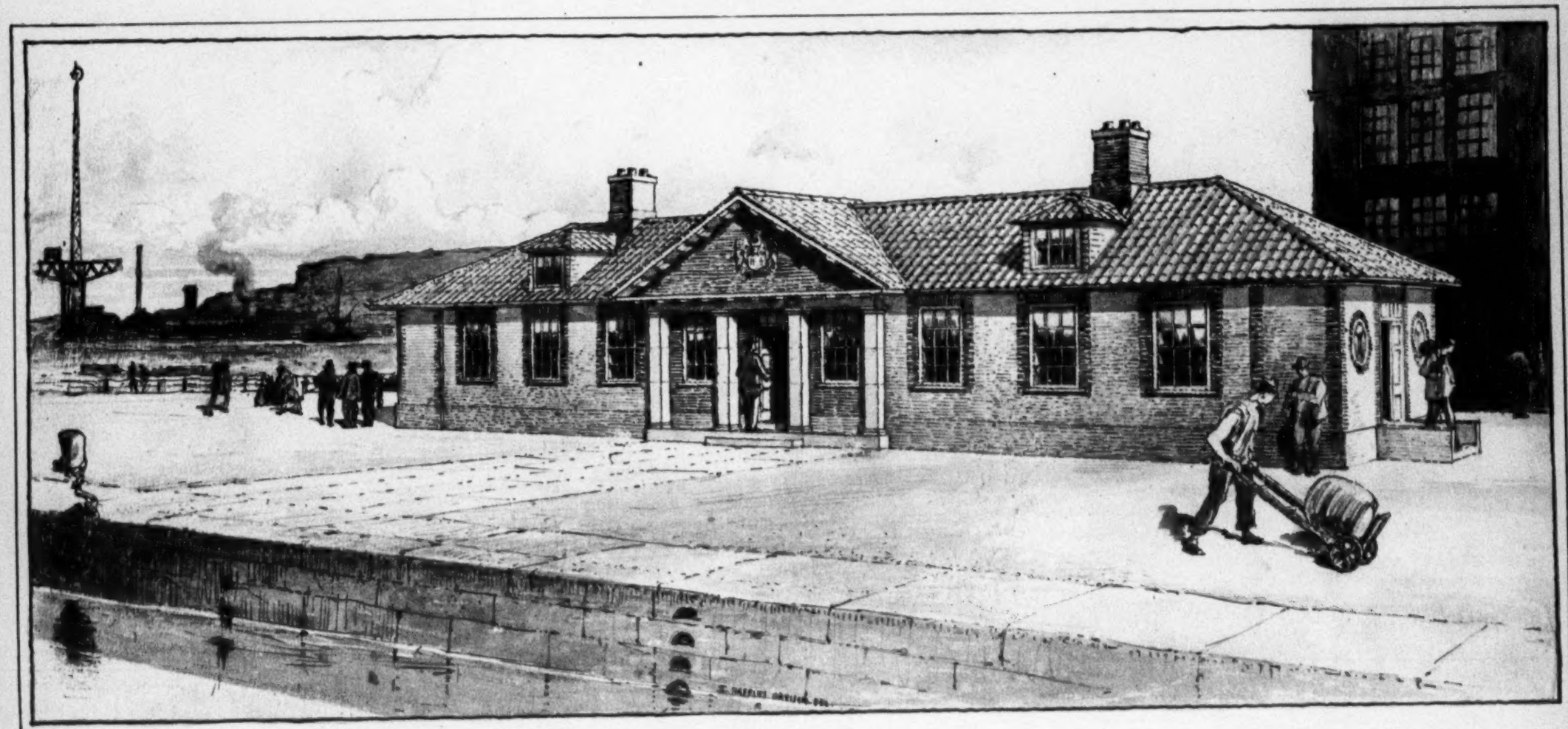
SIR EDWIN COOPER, F.R.

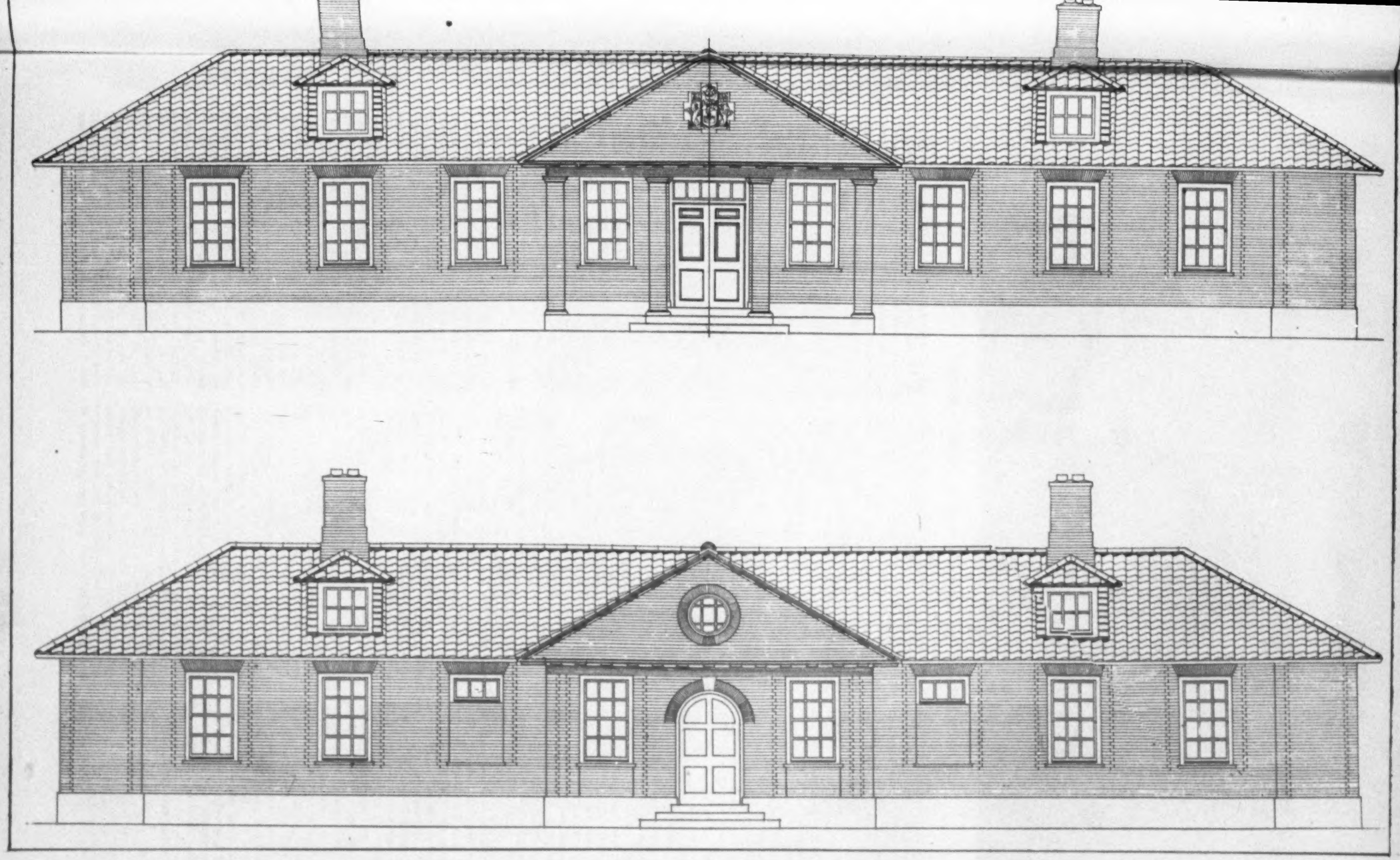






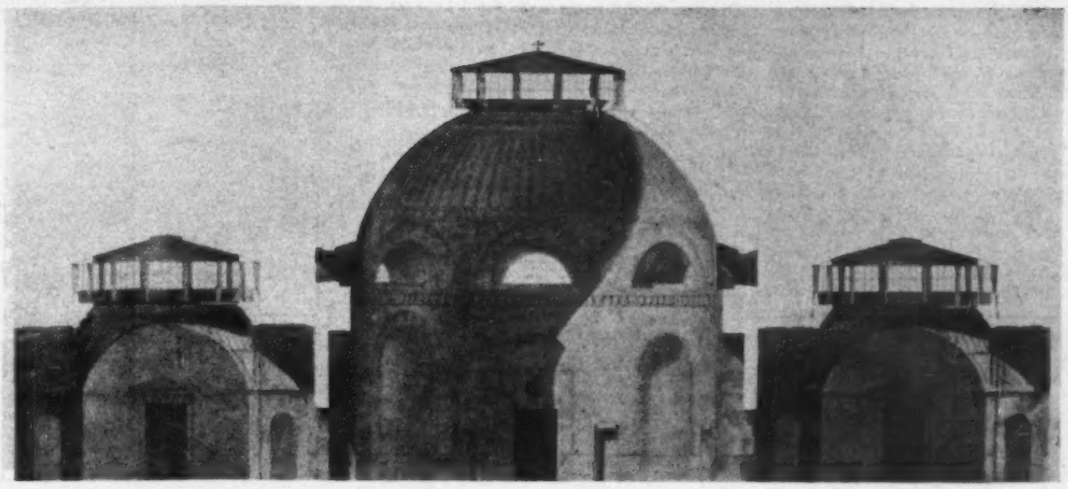
FORD, FOR THE PORT OF LONDON AUTHORITY
COOPER, F.R.I.B.A., ARCHITECT.





PIERHEAD DOCK MASTER'S OFFICES, KING GEORGE V. DOCK.

SIR EDWIN COOPER, F.R.I.B.A., ARCHITECT.



Section: Rotunda of Bank of England and Consols Office.

Masons were then getting 4s. 10d. a day, labourers 2s. 11d., carver (114 days) 6s. Mortar, 6d. a hod. Cube Portland is 4s. 5½d., including war freight and duty. Plain work on same is 1s. per ft. super., and sunk and moulding work, 1s. 3d. Previously these prices had been 10d. and 1s. There is nothing in the accounts to particularise the beautiful loggia, full of Greek feeling, standing over these arches, nor can the Tivoli Corner be identified. It is merely evident from the large amount of circular work that appears in the bills of 1804–5. The plumbers, Lancelot Burton and Ann Draper, charge cast lead at 36s. cwt. Plumbers get 4s. a day. "A new angular anvil rainwater head" is priced at £3 3s. 0d., and 6 in. lead R.W. pipe at 6s. 6d. a ft.; these prices had been £2 2s. 0d. and 6s. In 1789 cast sheet lead was only 23s. cwt., milled do. 24s., and plumbers had 3s. a day. In 1805 the bricklayers are carrying up the east and south fronts of this Court and putting in foundations of the new screen wall.

The formation of the arches of the new vestibule, Princes-street entrance, is priced in the last quarter of 1805. Bricklayers in 1806 are 4s. 10d. a day, and 4s. 4d. winter; labourers 2s. 10d. and 2s. 8d.; a load of 29 hods Dorking mortar, 30s.; grey stocks, 50s. a thousand; malms, 77s.; paving bricks, 70s.; plain tiles, 53s.; cones, 136s. 6d.

Brickwork a rod is £16 8s. 0d.; with malm facing, 4d. ft. extra.

There is a first mention of Parker's Stucco (Roman cement ?) jointing in piers and openings, 4s. 6d. a yard. In 1789 brickwork, grey stocks in foundations and wall to Princes-street, cost only £9 a rod; bricklayers, 3s. 4d. a day; labourers, 2s. 2d.; and grey stocks were 30s. a thousand. Masons were only at the same level; carpenters, 3s.; plasterers, 3s. 10d. a day, instead of 3s., illustrating the rise, no doubt largely due to war conditions. A curious item in 1800 is "Painting two French soldiers with cutting them out complete for Armoury, £4 14s. 6d." Possibly they were for target practice? At this time an item "Painting a model of the new building, 7s. 6d.," appears in the painter's bill. The Peace of Amiens, though short lived, was welcomed with illuminations, as "Transparent painting by Robert Smirke for south front, April 29, 1802, £84 0s. 0d." Two others are supplied by Wm. Miller, £42 and two old ones are altered and repaired for the occasion by Cornelius Dixon (probably Wyatt's clever assistant), £14 14s. 0d. The Victory of Vittoria, however, was kept with three days of illuminations, July 5, 6 and 7. The first day 3,171 lamps; second, 6,195; third, 6,995, 16,361 lamps at 7d. each, Fossick and Mathews, £477 3s. 11d. While the following year, April 11, 12 and 13, 1814, 36,115 were used at a cost of £1,053 7s. 1d., and on June 9, 10, 11, no less than 149,500 were used at a cost of £4,360, with, besides, "150 two-spout lamps for transparency, £22 10s. 0d." Waterloo falls behind this as the illuminations on June 23, 24, only required 16,228 lamps at £473 6s. 4d., and in 1821 George IV, on July 19, gets only 6,544 lamps, costing £195 17s. 4d., and for William IV, September 8, 1831, a mere £27 13s. 0d., seems to have been sufficient. A most significant record of comparative national enthusiasm.

"1804. Plaisterer, Thos. Palmer.

"Accountants' Hall and Passages each side of Vestibule:—

	£	s.	d.
2,348 ft. sup. float lath and plaster circular in panels, 5d.	48	18	4
91 bulls' heads, 10 in. deep, 2½ imbost, ears and drops fixed separate, 3s. 6d.	15	18	6
88 swags of fruit, flowers and ribbands, cast, trimmed, &c., fixed separate, 6s.	26	8	0
189 fluted pateras, 2½ in. diam., 4d.	3	3	0
223 plain „ 3 in. „ 3d.	2	15	9
98 flowers trimmed hollow, 6d. ..	2	9	0
One ornament 20 ft. 0 in. long, consisting of two cornucopias tied with ribband, oak leaves at centre, fluted at wreath with fruit, flowers, &c.*	8	8	0
103¾ days plaisterer, as per Note, 5s.	25	18	9
Two days ornament, do., 8s. ..		16	0
38½ Labourers, 2s. 10d.	5	9	1
41½ boys, 1s. 7d.	3	6	1
Total plaisterer's bill, £511 10s. 8d."			

Wm. Rothwell, Junr., the other plasterer, sent in similar bills.

Very few people realise that the Threadneedle-street front, the return façade halfway down Princes-street, and nearly all that towards Bartholomew-lane, only date from 1823. The screen walls, erected by Taylor in extension of Sampson's original Bank, were still standing in May of that year when Sir John Soane addressed a Report "to the Honorable, the Governor, the Deputy Governor, and the other Members of the Committee of Building." He says: "I am induced now to offer a few words on the subject, as the state of the exterior of the Bank requires immediate attention, and the regularity of the building must depend on the present determination of the Committee. . . . To restore the exterior of the south, east and south-west wings, in the same form they now are, without rounding off the corner next Bartholomew-lane, and without increasing the thickness of the walls in the several recesses (of Sir R. Taylor's arcaded design), so very necessary to be done, the expense will be about £10,000; but if the necessary additional strength be given to the building, and the angle next Bartholomew-lane curved, according to the design submitted, it will add materially to the safety and convenience of the Public, and the expense will not exceed £12,000. Permit me to conclude," he says, "by observing that, if the first idea, namely, that of restoring the south-east and south-west wings to their original form (Taylor's design), should be adopted this great national establishment will then present an irregular assemblage of heterogeneous parts, but, if it should be the pleasure of the Committee to approve the plan submitted, the whole of the exterior of this extensive pile, erected at so many different times, and under many different circumstances, will appear uniform, simple and characteristic.

"All of which is submitted, John Soane, Architect to the Governor & Co. of the Bank of England. 28 May, 1823."

The veteran architect was then 69, and had spent 35 years on the work, and his concluding and very significant words are eloquent of the spirit that was carrying him through to the final completion of his great task. This report of his shows clearly that, while Taylor's walls were rebuilt, the centre, by Sampson, was only cased up. The estimated cost seems very small, but Sir John Soane was so extraordinary punctilious and successful in not exceeding his estimates that it is unlikely that it was surpassed. He was helped by the fall in prices, as in 1825 Portland stone was down to 3s. 5d. ft. cube. For the recesses, "18 Portland stone trusses, 2 ft. 3 in. long with 6 in. face" are only charged at 90s. each, for masonry and carving, while the honeysuckle ornaments over doors cost 30s. each. It had been charged against Soane, in 1797, that he should have continued round Lothbury the design of Taylor's wing, but Soane's clear answer was that the scale of the older screen wall was too small, and that, owing to the great fall in the ground at the back, Taylor's order would have had to stand on a disproportionate high plinth. There is not a shadow of doubt that Soane was right in his refusal to be tied to the old scale of height.† As it is the greatest defect on the Threadneedle-street front is the absence of any plinth. It is very possible that, as is constantly happening in London, the pavements have been raised, and certainly in 1796 no one foresaw the vast extension of the future Bank, but one cannot help regretting that the base level of the new order at that date was not set higher by two or three feet, which would have in 1823 greatly aided Soane in dealing with the Threadneedle-street front. It is unfortunate that the main front of the Bank was deferred so late, and that the earlier and fresher work of Sir John Soane has always been at the rear of the building. Artistic opinion crystallised at

* The original model for this is in the Sir John Soane Museum.

† *Taylor's Order*: Plinth, 4 ft. 9 in.; column, 14 ft. 9 in.; entablature, 3 ft. 3 in.; balustrade, 3 ft. 6 in. = 26 ft. 3 in. *Soane's Order*: Plinth, 7 ft. 8½ in.; column, 23 ft. 4½ in.; entablature, 4 ft. 7½ in.; blocking, 3 ft.; attic, 7 ft. 3 in. = 45 ft. 6½ in., or without attic, 38 ft. 3½ in. The difference on the column, 23 ft. 4½ in. against 14 ft. 9 in. was vital.

once on the Tivoli Corner as the masterpiece of the architect, and that, as we have seen, is work of the 1805 period. Soane had been through some bitter experiences in the 18 years that had elapsed, and though the fire of his enthusiasm still burnt, much of the joy of existence had been clouded over. In 1824 he had an operation for cataract, and his health was badly shaken; only his indomitable spirit carried him for another decade, until his resignation in 1833. Concurrently with the decision to complete the façades, it was decided to enclose the Bank with a railing. Probably Soane greatly regretted the necessity of this addition. In 1824 the smith supplies "148 ft. 3 in. feet run handsome framed railing and double top rail, ornamental spike heads, fixed with cast blocks, including patterns complete, £489 7s. 11d." "Cast iron and lead, 32s. cwt., wrought iron 74s. 8d. do."

The process of taking the railing all round the Bank went on for some years. The Garden Court was laid out May, 1824, J. Allport being the gardener and florist. Laurels, box, lilac, rhododendrons, cedars, azaleas, geraniums, hydrangeas, &c., are included in a bill of £28 9s. 6d.

In June and July, £10 15s. 0d. is spent on flowers, and in August and October, £3 14s. 6d. for chrysanthemums, privet and holly. At this time there is a mention of steel shutters—7 pairs for £102 16s. 3d.—no doubt for the doorways. In 1827 the rotunda is provided with a new skylight costing £46 12s. 0d., and in 1830 new skylights were supplied to the Bank Stock Office and the vestibule to Bartholomew-lane. The first mention of hot water apparatus occurs in 1883, when £100 was paid for Perkins's high pressure system for the Court Room. This is the same apparatus as that installed at the Sir John Soane Museum in 1831, where it is still in use, as also at the Royal Society of Arts in the Adelphi. No doubt after this date the old stoves gradually disappeared. Gas was only slowly introduced, as in 1833, in the Lothbury Court, and Bullion Office Court. It only remains to call attention to the remarkable table of annual expenditure on the Bank, which follows. This of itself dates the principal periods of the work by the rise and fall in the annual outlay under Sir John Soane's direction. This remarkable, if not unique, record of the actual process of the work fully bears out the claim, made on other grounds as well, that the Bank of England is a great national historical building. Others, as will have been seen, as well as Sir John Soane literally built their lives into the building, and in the future, as is perhaps better recognised to-day by our cousins than ourselves, the Bank will be regarded as important a link in the chain of national history as any work of the Middle Ages.

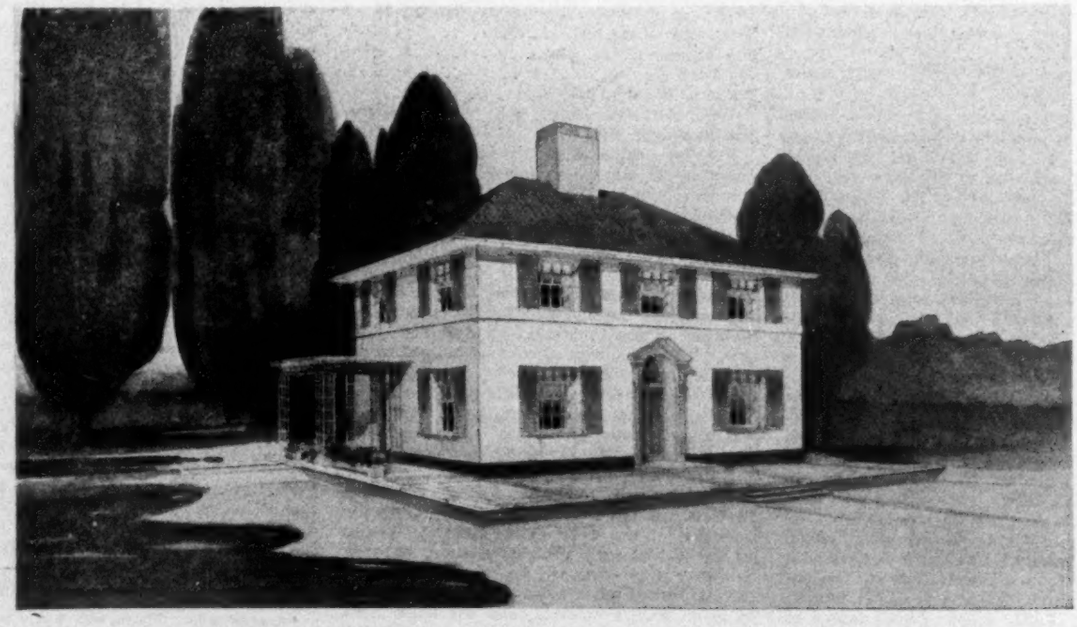
Annual Expenditure on the Bank from 1788 to 1833, from the half-yearly statements, rendered by Sir John Soane to the Governors:—

		£	s.	d.
1788.	Sir John Soane appointed Architect, October 16			
1789.	Half-year to Xmas: New Barracks and some alterations	6,082	15	1
1790. 1791.	Whole year: New Barracks and some alterations and back additions ..	11,393 / 13,014	3 / 2	4 / 7
1792.	Bank Stock Office reconstructed	9,430	9	6
1793.	Do. do. ..	10,646	17	3
1794.	First half of façade to Lothbury before it was	22,025	1	2
1795.	doubled in length by the	29,291	11	0
1796.	1800 extension	26,210	17	3
1797.	Lothbury Court (after October 10, 1797)	17,946	12	5
1798.	Do. do. ..	22,696	18	5
1799.	Lothbury and New Library and Transfer Office ..	22,824	11	9
1800.	Do. do. ..	16,669	13	2
1801.	Completion Lothbury Court and New Accountants' Office	25,449	14	5
1802. 1803.	Extension Princes-street and Lothbury	15,600 / 29,485	6 / 10	1 / 9
1804. 1805.	Do. and Tivoli Corner built	33,881 / 49,926	13 / 18	6 / 1
1806.	.. ..	25,546	14	5
1807.	Includes Robins for Desks, &c., £1,745	33,583	7	8
1808.	Includes the 5 new Houses, Princes-street	46,464	1	0
1809.	Do. do. ..	24,494	0	1
1810.	Do. do. ..	41,603	6	1
1811.	New Houses still in hand	23,617	10	2
1812.	.. ..	11,042	15	10
1813.	Illuminations (Vittoria) July and also November, say, £1,000 (included) ..	12,167	17	10
1814.	Illuminations April and June (£5,440 16s. 5d.) ..	18,648	4	1
1815.	Illuminations, June 23, 24 (£473 6s. 4d.), New Treasury and entrance to Rotunda, &c.	18,335	4	2
1816.	.. ..	22,290	11	9
1817.	.. ..	16,793	9	4
1818.	National Debt Redemption included	24,356	19	2
1819.	Do. do. ..	35,320	6	5
1820.	.. ..	15,181	0	3
1821.	.. ..	10,867	9	6
1822.	Additional room N.D.R. Office	15,786	1	11
1823.	.. ..	14,754	17	5
1824.	Bank Garden (Bank railings begun)	20,025	9	5
1825. 1826.* 1827.	Completion work to façade to Threadneedle-street and returns to side street	15,835 / 16,705 / 10,650	19 / 0 / 7	7 / 3 / 3
1828.	.. ..	5,255	9	2
1829.	.. ..	3,482	2	1
1830.	.. ..	5,029	13	9
1831.	.. ..	5,886	8	8
1832.	.. ..	6,249	5	8
1833.	Sir John Soane resigned, October 16	4,051	12	0
	Estimated total for the 45 years, 1788–1833	£866,602	0	8

*From this time the Bank of England began Branch Banks at various provincial centres, but these accounts are not included, being separately rendered by Sir John Soane. These early local banks seem to have been mainly alterations of old premises. C. R. Cockerell, successor to Soane in 1833, began the series of important new buildings as at Liverpool, &c.

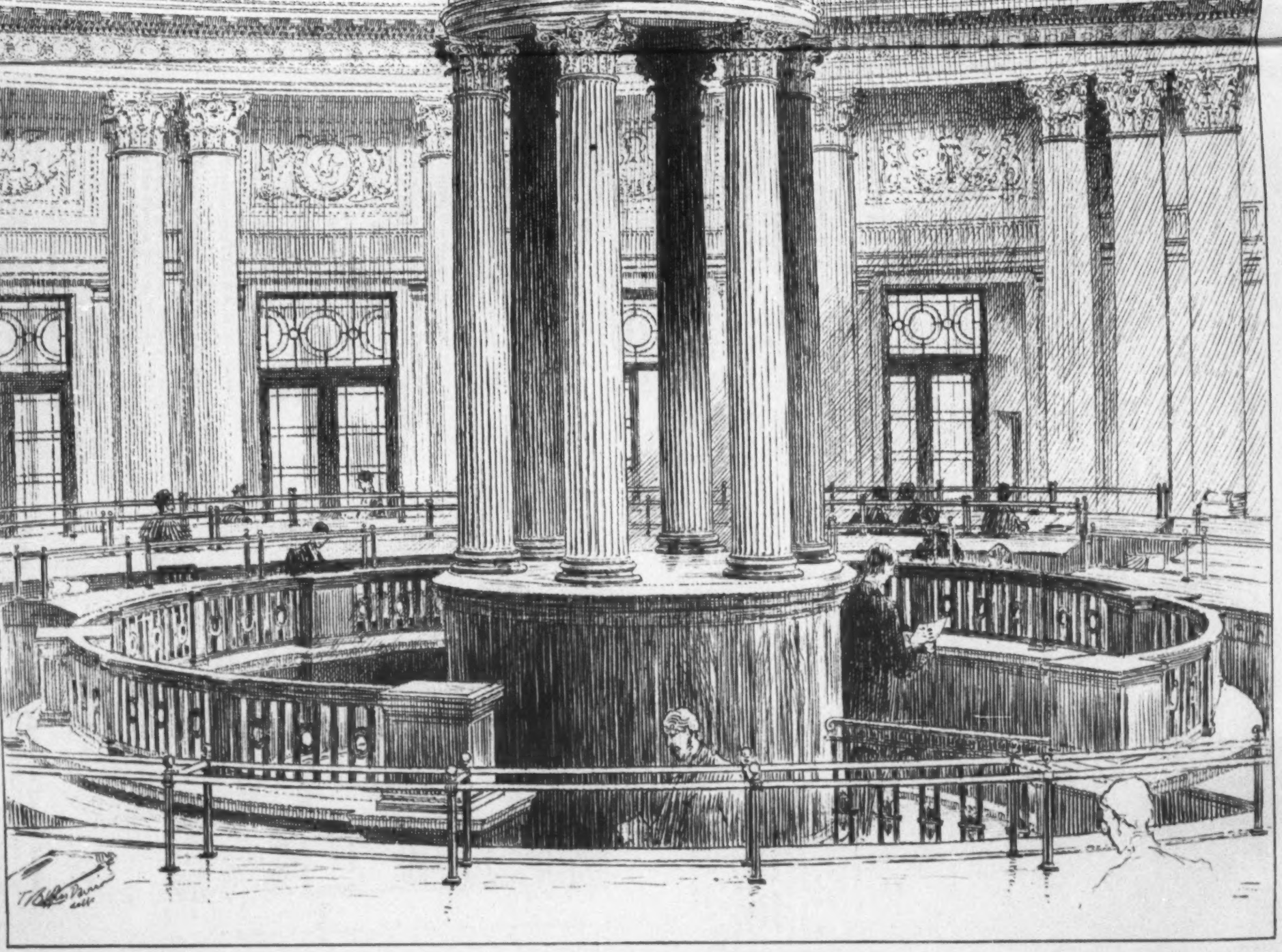
Excavating for Roman Relics.

To-morrow (Saturday) excavation work will be resumed for Roman relics at Richborough Castle, near Sandwich. Soil will be turned over which has lain undisturbed for quite 1,400 years. The work is being undertaken by the Kent Archæological Society, in conjunction with the Society of Antiquaries and the Society for Promoting Roman Studies. Richborough is one of the most important Roman sites in this country. It was the port of passage between Britain and Gaul, and later was one of the chains of forts erected on the East and South Coasts against the Saxons.



House at North Lancing. MR. C. COWLES-VOYSEY, A.R.I.B.A., Architect.

[This house, which is now being completed, faces south towards the sea. It contains two living-rooms and four bedrooms. It is built with cavity brick walls, plastered externally, and cream washed. The shutters and doors are painted green. The roof is covered with interlocking double Roman tiles.]



CENTRE OF ROTUNDA, PORT OF LONDON BUILDING.

SIR EDWIN COOPER, F.R.I.B.A., ARCHITECT.

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ILLUSTRATIONS.

P.L.A. Sports Pavilion, Stands, and Groundsman's Cottage at Ilford.

These buildings are to be erected on the Port of London Authority's Sports Ground at Ilford.

The pavilion stands on elevated ground commanding a view of the playing field and the surrounding country. The walls are faced with 2 in. light red bricks with darker bricks for dressing of quoins, window jambs and plinth. The stands are situated below the pavilion, and are constructed of timber with a tile roof. The groundsman's cottage lies behind the pavilion, and is treated similarly, but has a steep-pitched roof of tiles.

The pavilion has a feeling of breadth and dignity of treatment which are pleasing for a central feature in the sports grounds. The picturesque cottage for the groundsman appears to the left of the view.

The work will be carried out by Messrs. William Saint, Ltd., of Cambridge; electric lighting by Messrs. Higgins & Griffiths, Ltd.; heating and ventilation by Messrs. Mumford, Bailey & Preston, Ltd.; The clerk of works is Mr. Le Marie.

Sir Edwin Cooper, F.R.I.B.A., is the architect.

New Offices, East India Dock.

This building is being erected on the quay of the East India Dock, facing the Export Dock. Accommodation is provided for the Warehouse-keeper and staff, with a large general office, pay office, dining room, kitchen, scullery, heating chamber and lavatories.

The walls are faced with light red bricks, dark bricks being used for the dressing of quoins, window jambs, and plinth. The roof over the centre portion of the building is covered with pantiles with concrete flats at each end.

The building contractors are Messrs. Walter Lawrence & Sons; electric lighting, Messrs. Higgins & Griffiths, Ltd.; heating and ventilation, Messrs. Mumford, Bailey & Preston, Ltd. The clerk of works is Mr. Le Marie.

Sir Edwin Cooper, F.R.I.B.A., is the architect.

Dockmaster's Offices, King George V Dock.

This building, of which Sir Edwin Cooper, F.R.I.B.A., is the architect, is being erected on the Pier Head of the lock of King George V dock, providing accommodation for the Dock-master, pilots, searchers, foremen and lockmen, with a rope store adjoining.

The exterior is of 2 in. red bricks, dark bricks being used for the dressing of quoins and window jambs, and a lighter shade for the walls. Tiles are used in the arches. The roof is covered with pantiles.

The contractors for the building are Messrs. Walter Lawrence & Sons; electric lighting, Messrs. Higgins & Griffiths, Ltd.; water and gas mains, Messrs. Mumford, Bailey & Preston, Ltd. The clerk of works is Mr. Le Marie.

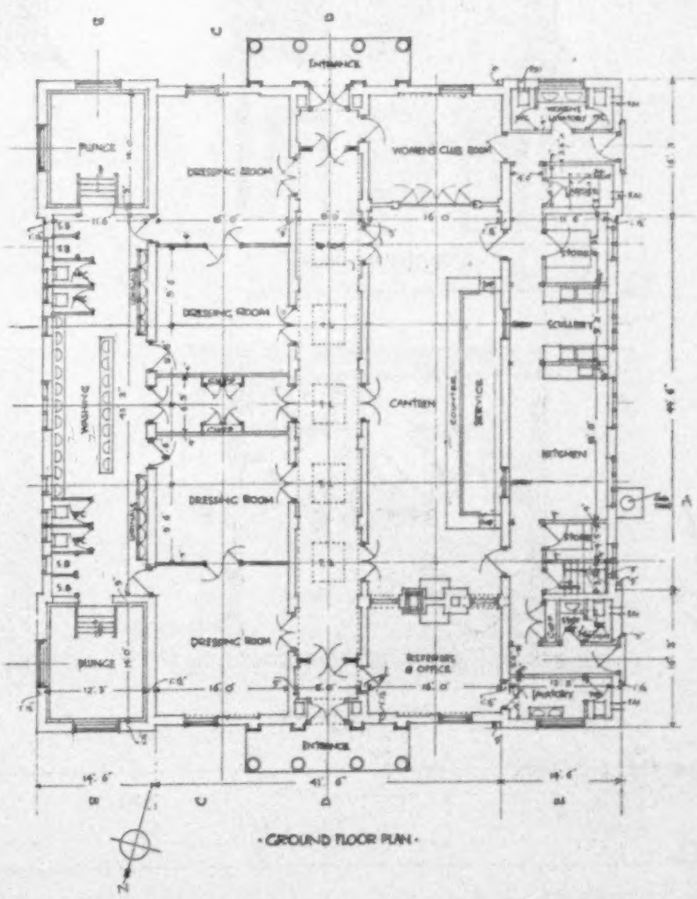
Port of London Authority Building.

We also illustrate the Rotunda of Sir Edwin Cooper's Port of London Authority Building, Tower Hill. The clock tower, counter and desks in this Rotunda were made by Messrs. John P. White & Sons, Ltd., of The Pyghtle Works, Bedford, to the designs of the architect.

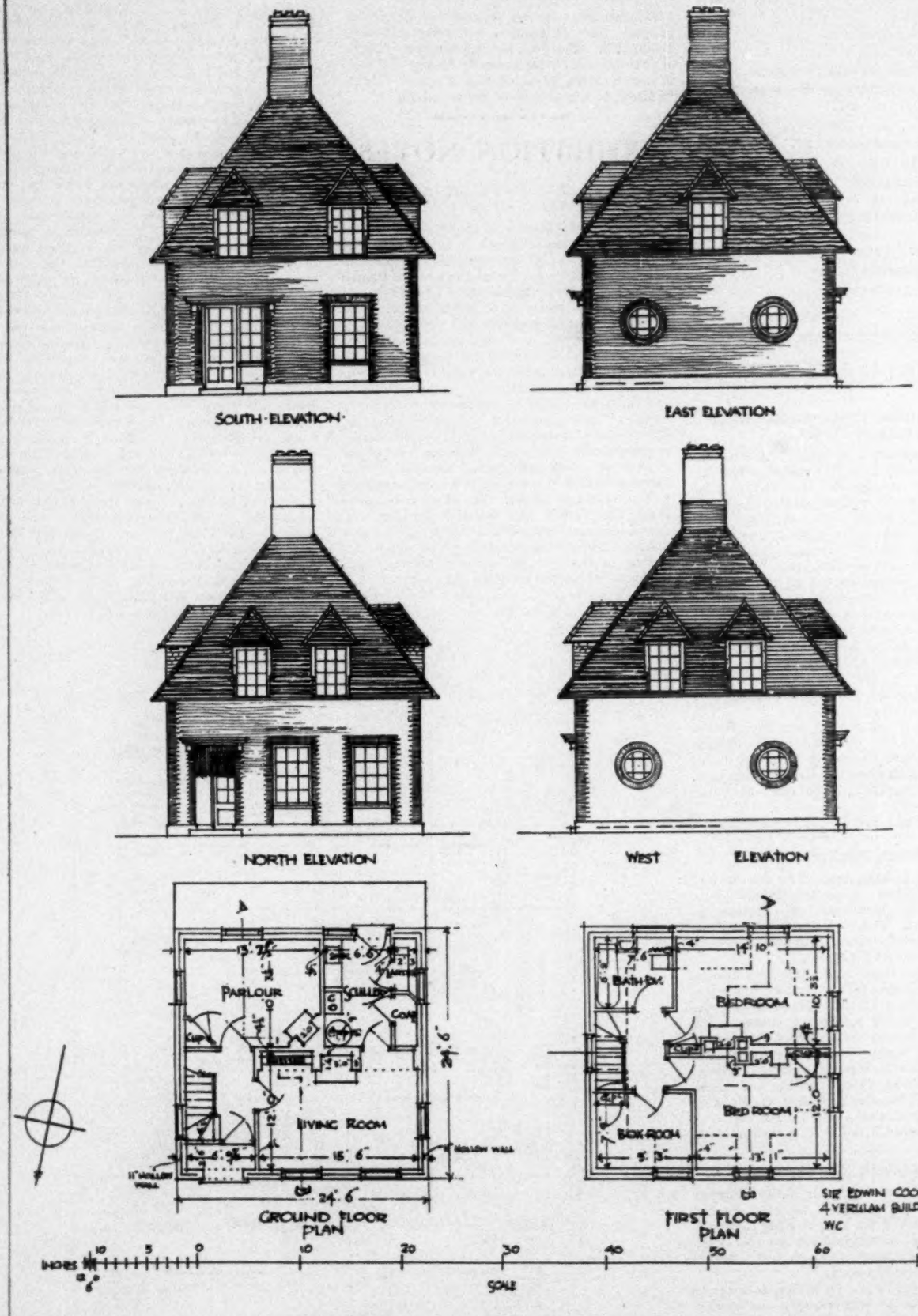
EXHIBITION NOTES.

NORFOLK AND NORWICH ARCHITECTURAL EXHIBITION.

THE recent exhibitions of architectural photographs which have been held in London and the provincial cities of the country, particularly those arranged by the Royal Institute of British Architects and the Architecture Club, have no doubt been a stimulus to other architectural societies to bring together not only drawings or sketches of proposed or executed work, but photographs of completed buildings. We confess to a preference for the exhibition of drawings, as drawings are the basis of architecture, and can give at least as satisfactory a representation as photographs of a building as it is. Photography has helped to create public interest in architecture, and this, of course, is one of the objects of these exhibitions, especially when they are housed in buildings to which the general public have free access. For these reasons we think the Norfolk and Norwich Architectural Association was well advised to hold their recent exhibition of architectural drawings and photographs in the new gallery of Norwich Castle Museum, where the exhibits were appropriately grouped on the walls, and made a highly creditable display. The exhibits were not all of recent work, but from both photographs and drawings we realised that there has been a fair amount of activity in the district, especially in housing work and war memorials. One of the best collections, of drawings and photographs, was that of Mr. G. J. Skipper, F.R.I.B.A., of Norwich, whose Holt housing scheme, which we recently illustrated, was represented by an excellent drawing by Mr. T. Raffles Davison. Mr. Skipper has given a good deal of attention to building in clay lump, and has shown that the material is well adapted to cottage building, several of the cottages which he exhibited being built of this material, and at a cost which suggests that more use might be made of it for cottage building. The Holt, East Dereham, Lenwade, and Poringland cottages, amongst others, are admirable in design, and show what can be done by a competent architect. A collection of photographs of recent work by Mr. J. Page, B.A., A.R.I.B.A., was shown, including the Harris memorial reredos at Langham St. Andrew, Norfolk, and the war memorial screen at Great Ryburgh, both interesting works, while drawings of Wolterton Manor, East Barsham, showed a scheme of partial restoration. Messrs. Lacey & Upcher's exhibit consisted of various war memorials and church work, including the restoration of St. Martin's Church, Overstrand. Messrs. E. Boardman & Son's collection, mainly of photographs, showed both domestic and public work, including Carrow Abbey; Jenny Lind Hospital, Norwich; Stuart Court, Norwich; and house at Drayton, Norwich. Mr. Stanley Wearing, A.R.I.B.A., showed several housing schemes of interest, two of the principal being Lowestoft Borough housing scheme and the Norwich Mile Cross scheme. Other exhibitors were Messrs. A. F. Scott & Sons, Messrs. Morgan & Buckingham, Messrs. Olley & Haward, Messrs. Buckingham & Berry, Mr. S. G. Livock, Mr. Albert C. Havers, Mr. E. J. Tench, F.R.I.B.A., and Mr. J. O. Bond, Lic.R.I.B.A.

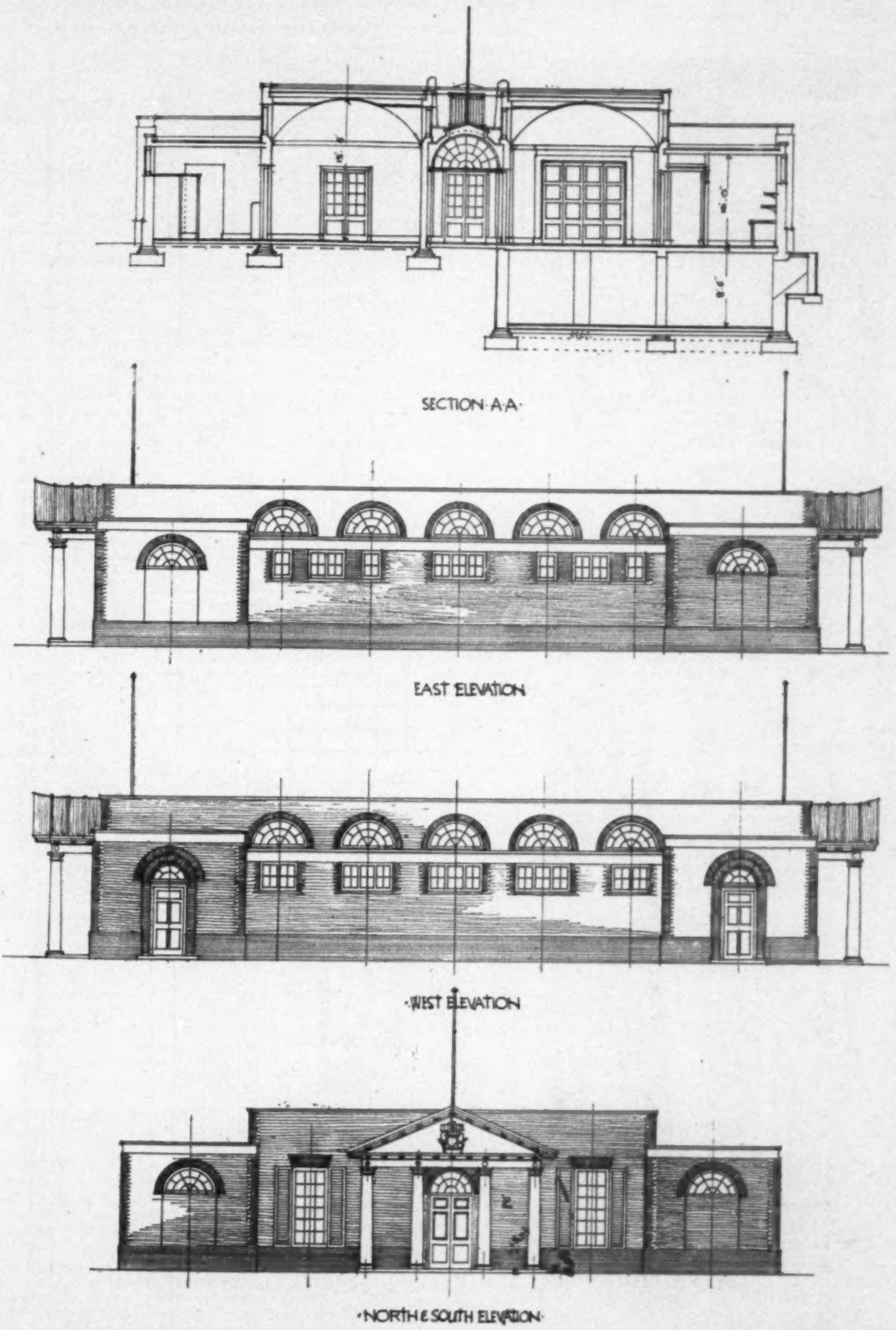


Sports Pavilion, Hford, for the Port of London Authority.
SIR EDWIN COOPER, F.R.I.B.A., Architect.



Groundsman's Cottage, Ilford, for the Port of London Authority.

Sir Edwin Cooper, F.R.I.B.A., Architect.



Sports Pavilion, Ilford, for the Port of London Authority.
SIR EDWIN COOPER, F.R.I.B.A., Architect.

New Offices, East India Dock, for the Port of London Authority.
Sir Edwin Cooper, F.R.I.B.A., Architect.

THE ROYAL ARCHÆOLOGICAL INSTITUTE

ANNUAL MEETING.

BY H. J. D. ASTLEY, M.A., Litt.D., F.R.Hist.Soc.

THE annual meeting of the Royal Archæological Institute was held at Norwich from July 25 to August 1. Owing to the death of Sir H. H. Howorth, the presidency of the meeting devolved on Mr. W. Heward Bell (President of the Wilts Archæological Society), and the post of Honorary Secretary was ably filled by Mr. L. G. Bolingbroke, a well-known local antiquary.

Civic Reception.

On Tuesday morning a civic welcome was given to the visitors, who numbered about 100, at the Guildhall, by the Lord Mayor of Norwich (Sir George Morse), who was accompanied by Mr. Arnold Miller (Town Clerk) and Mr. J. H. F. Walter (President of the Norfolk and Norwich Archæological Society). Mr. Heward Bell suitably replied.

After seeing the Corporation plate—a fine collection—the crypt and other features of the Guildhall, the visitors proceeded to St. Peter Mancroft Church, where an address was given and they were conducted round by the Rev. Canon Meyrick, the vicar.

Norwich Cathedral.

The afternoon was occupied by a visit to the cathedral, where the party were received by the Dean. An address was given by Mr. A. Hamilton Thompson, F.S.A., who exhibited plans of the building and discussed its history and architectural details. The address was particularly interesting from the fact that the lecturer broached the question as to who actually built the cathedral. He said Norwich Cathedral was always associated with the name of Herbert de Losinga as its founder. But the life of a bishop was a strenuous one in mediæval times, and it was extremely unlikely that one in that position had the leisure or the training to do what must have required the application of a lifetime. The person really responsible for the plans of the building must have been the master mason employed by the bishop. We were accustomed to speak of certain changes as being due to the work of certain bishops. In his belief they were due rather to a change in the master masons. In process of time Norwich Cathedral had suffered many alterations, but in the Middle Ages these alterations were not, like modern alterations and additions, attempts to graft imitations of a dead style upon historical buildings; they were the work of artists who were still working in a living style, in sympathy with the social and economic conditions of their age.

A perambulation of the cathedral followed, under the guidance of the Dean, and the Bishop entertained the party to tea at the Palace.

Eleventh-century Village Churches.

In the evening a lecture was given in the room over the St. Ethelbert's Gateway by Professor Baldwin Brown on "English Village Churches in the Eleventh Century," illustrated with lantern views.

The lecturer explained that his remarks would be confined to the central period of the century, and would deal specially with the Saxo-Norman overlap, by which was meant the appearance in the same building of Saxon and Norman features. The theme had been selected partly because that "overlap" was represented in a large number of East Anglian churches. It was, of course, rarely that one met with a building presenting the same style throughout the existing fabric. The village church as they knew it was generally the work of the centuries from the thirteenth to fifteenth, but it commonly bore traces of older handiwork of the twelfth and even the eleventh, while between two and three hundred examples up and down the country contained work that carried them back to the Anglo-Saxon period. The great majority of mediæval churches were, indeed, of Saxon foundation, though the fabric of them might have been completely reconstructed. Hence the examples noted, though regarded specially from the standpont of the eleventh century, presented themselves as illustrating the village church in general, always mediæval, though representing more than one century. Built originally by the local lord or squire, but for the common use, at first probably of wood, but later rebuilt in stone, enlarged by the Normans after the Conquest, altered, added to, refitted, from age to age, the church had come down to them as the dominant feature of the settlements, rural and semi-urban. In all Europe there was no class of monuments more full of varied interest than English country churches, for, belonging on the one hand to the great, and on the other hand to the simple, they enshrined a large part of the social history of the land. The Saxons had their own repertory of constructive and ornamental forms which was quite different from that of the Normans. Characteristic Anglo-Saxon marks, none of which was used by the Normans in their own Duchy, were: (1) Double-splayed windows; (2) pilaster-strips, narrow, upright bands of stonework, not buttresses, but decorative enrichments of walls; (3) similar projecting strips surrounding openings; (4) double openings in the belfry stages of towers divided by mid-wall shafts; (5) the special treatment of corners of structures and jambs of openings called popularly "long-and-short work." The Normans had also their characteristic forms and methods, and the relation between the two sets of forms when they occurred in the same building required careful investigation. The lecturer, in conclusion, remarked on the interest of the study of the buildings of this period as casting a light on the historica. situation after the Conquest. It was a fact, worthy of special attention, because on general grounds it would not be anticipated that certain Anglo-Saxon schemes of planning and details were taken over by the Normans and became established features of post-Conquest architecture. That Norman and Saxon worked together on the churches, and that, at any rate at first, the Saxon influence was on the whole predominant, was not without its historical significance, and was a rebuke to those old-fashioned scholars, if any survived, who still believed that architecture, with all the other elements of civilisation, was introduced into Great Britain by the Norman invaders.

Wymondham.

Wednesday morning was spent in visits to Wymondham, Attleborough, and Hingham; the afternoon to Caistor Camp and Carrow Abbey.

The first stop was made at Wymondham, in order to see the magnificent remains of the Abbey Church, of which only the nave, used as the parish church, and the central and west towers, still stand. William d'Albini, a great landowner in Norfolk, founded a priory at Wymondham in 1107 for twelve monks of the Benedictine order, as a cell of St. Alban's. In 1448 it became an independent Abbey. The original church, which consisted of nave, with north and south aisles, a Galilee porch at the west end between two western towers, transepts with central tower, and presbytery with north and south chapels, was completed about 1130. In the thirteenth century the choir was extended eastward. In 1400, the Norman central tower having become decayed, the present octagonal tower was built on the original crossing. In 1445 the two western towers were pulled down and the present west tower erected.

Attleborough.

Attleborough Church, described by Mr. A. B. Whittingbame, was originally a cruciform structure of the Middle Norman period, of which only the central tower remains. In the fifteenth century the nave and aisles were rebuilt, but the window-tracery could be taken for Decorated work apart from its mouldings. The rood screen of this date, which crossed the nave and aisles without a break, still exists, though, unfortunately, it has been removed to the west end of the church. Mr. Agmer Vallance described it as a magnificent specimen, and typical of Norfolk screen work, richly decorated, painted and gilt, but the tracery somewhat poor and flimsy. It was the finest example he knew, except that at Ranworth, and he hoped it might be restored ere long to its proper position.

Hingham.

Hingham Church was next visited. This is a fourteenth century church, having been built by Remigius de Hethersett, who was rector from 1316 to 1359. The east window is filled with German glass of about 1500, and contains figures of St. Anne, the Madonna, and Saints. There is a fine table tomb with canopy over to Thomas, Lord Morley, who died in 1435, and his wife. It is interesting to remember that Abraham Lincoln was descended from the Lincoln family of Hingham, and a bust of the President has been lately presented to the church by American citizens.

Caistor.

When the visitors arrived at Caistor the Rev. Dr. Astley gave an address on the Camp. He adduced reasons for holding that Caistor is the *Venta Icenorum* of the Ninth Iter of Antoninus, and not Norwich, as some Norfolk antiquaries mistakenly hold; and explained *Venta* as being derived from Lat. *vendere*, to sell, and meaning, therefore, "the market-town of the Iceni," similarly to *Venta Belgarum* and *Venta Silurum* in Britain, and a host of Ventas in Spain and Portugal to this day. The Camp is about 34 acres in extent, strongly walled on pre-Roman foundations, and with towers at intervals, erected in the third century. One of these has lately been excavated under the supervision of the Rev. J. W. Corbould-Warren, the owner of the site; but the whole area awaits systematic excavation. The "finds" of coins, jewellery, pottery, and other articles are endless; the coins show continuous occupation from Nero to Gratian.

Carrow.

At Carrow Abbey Mr. B. Cozens-Hardy (Hon. Secretary, Norfolk Archæological Society) told the story of the house. Carrow was founded in the reign of Stephen as a Priory of Benedictine nuns, and was famous, as long as it endured, as a training school for Norfolk ladies. It was suppressed in 1536. The church and conventual buildings are all in ruins, but the results of Mr. J. J. Colman's excavations in 1881 may be seen. The present mansion was originally the Prioress's lodging, the older portion consisting of the hall, the parlour (panelled in dark oak), and the bedrooms above. It was built by Prioress Isabella Wygun early in the sixteenth century. The mantelpiece in her parlour bears her rebus, on one side the letter Y, on the other a gun.

In the evening a reception was held by Mr. and Mrs. L. G. Bolingbroke in the Strangers' Hall, their former home, now generously gifted to the city. A detailed history of the building was read by Mr. Bolingbroke, and its rooms and various contents, which form a veritable civic museum, were inspected.

Great Snoring.

Thursday was set apart for a tour in N.W. Norfolk.

The first place of call was Great Snoring, near Fakenham, where the rectory and church were described by Mr. John Page, A.R.I.B.A. The rectory takes its place with East Barsham Hall in the same neighbourhood as two remarkable examples of Early

New Offices, East India Dock, for the Port of London Authority.
SIR EDWIN COOPER, F.R.I.B.A., Architect.

Renaissance or Tudor architecture. Great Snoring rectory was originally a manor-house erected by the Shelton family, whose rebus, a "shell" and a "tun" is inscribed in a scroll over the entrance door. There were originally two corner turrets, of which only one now remains to its full height. These show the influence of Gothic which still survived. The two upper stages are of richly-traceried terra-cotta work, and a rich band of terra-cotta shields and lozenges, with the arms of the Sheltons, and the letters MIHC, *i.e.*, "Mary and Jesus" below, continuously repeated, runs the whole length of the east and south sides.

Binham Priory was next visited, where Mr. F. E. Howard described the church (of which only the nave with its fine Norman interior and beautiful Early English west front remains, as at Wymondham), and the ruins of the conventual buildings. Mr. A. Hamilton Thompson gave the history of the Priory. It was founded, according to Matthew Paris, about 1093 by Peter de Valoin, as a cell to St. Alban's Abbey, and the eastern part is of that date. The west front was rebuilt by Prior Richard de Parco between 1225 and 1240, and is a very fine example of the work of the period. The south aisle disappeared long ago, but the north aisle was only removed early in the last century, when the arcade was bricked up and some of the original fifteenth century windows of the aisle were inserted. The ruins of the western windows of north and south aisles remain, that on the north being one of the earliest examples known of a window with a transom.

The morning concluded with a visit to the so-called "Danish" Camp at Warham, where on the slopes of the circumvallations the Rev. Dr. Astley set forth such facts as are now generally received. This so-called Danish camp, he said, was situated two miles south-east of Wells. It stood on the slope of a hill, and in a bend of the river, some 60 ft. above the sea-level on the north-east side, while that part adjoining the river was some 30 ft. above the sea. The entrenchments were strong, being composed of chalk overgrown with turf, but the position was naturally weak, as on the north-east side the land outside was higher than that within. The ground covered by the earthworks and camp was approximately nine acres, the interior space alone about three and a half acres. There were two ramparts; the inner one over a quarter of a mile in circumference. In 1914 excavations were undertaken, in the course of which definite evidences of Roman occupation were found, and also slight indications of the presence of late Celtic pottery; but the earliest date of Warham Camp had not yet been ascertained. There seemed to be no evidence of Danish occupation, but it had been the fashion to call this camp and others in the neighbourhood Danish, through the known fact of the invasion of East Anglia by these pirates of the North Sea.

Lunch was partaken of at Wells, after which the Walsinghams were visited.

Great Walsingham Church.

Great Walsingham Church, in structure and proportion is a splendid example of the Norfolk village church. It is at some points in a deplorable state of disrepair. Mr. F. E. Howard said the church dated from the fourteenth century, with the exception of the south porch which was built a hundred years later. The chancel had long been in ruins. The window tracery throughout was exceptionally beautiful and might be instructively compared with Beeston-next-Mileham. The roof appeared to be rather later than the walls; and that of the nave was arch-braced and was of exceptional construction. The benches were of the early sixteenth century; the pulpit was probably of the fifteenth; the font cover and the altar rails were of the seventeenth. The remaining fragments of stained glass were coeval with the windows. There was a consecration cross on the south wall.

Walsingham Priory.

Speaking at Little Walsingham Priory, Dr. A. Hamilton Thompson described it as one of the greatest scenes of pilgrimage in the Middle Ages. The place was spoken of as Walsingham Abbey, the term abbey being commonly used even where houses were actually ruled not by abbots but by priors. This house of Our Lady of Walsingham was founded some time in the twelfth century. The fame of the house was due to the fact that it possessed a celebrated shrine, a wooden shrine having two doorways, so that worshippers could come in by one and go out by the other, said to be in imitation of the Holy House of Loretto, from which, it was said, the body of Our Lady was translated in 1291. There were still in existence two important chapels which were used as stations by pilgrims on their way to Walsingham; one was the Red Mount Chapel at King's Lynn, built about the beginning of the sixteenth century, and the other was the beautiful fourteenth century chapel between Walsingham and East Barsham, called the Slipper Chapel, because it was at this point, in all probability, that the pilgrims took off their shoes before approaching the sacred place. The Priory of Austin Canons, founded on the site of an earlier chapel of the Blessed Virgin about the middle of the twelfth century, was entered by a fifteenth-century gatehouse in the west wall of the precinct, adjoining which were remains of the almonry buildings. The church stood on the north side of the cloister, and was of an unusual plan, a long aisled building without transepts, and with an aisleless bay projecting at the east end. The east wall, with very beautiful early fourteenth-century detail, remained; the gable was rebuilt and a large window inserted in the fifteenth century. There were also remains of the western piers of the nave. On the north side was a small chapel, projecting from the north wall, and a large projecting building further west, which appeared to have been the *novum opus*, built in the fifteenth century to hold the celebrated shrine. The south part of the eastern range of the cloister, including a passage through the range, and the common house or dormitory sub-vault, remained. The latter, with the vaulted passage between the dormitory and refectory, was included in the modern house. Much of the south wall of the refectory, with its pulpit and stair, was left; the west wall and gable, the doorways of the screens at the west end, and portions of the north wall also remained. The west range, which probably contained the cellar with the prior's guest hall and great chamber above, had disappeared. Remains of other buildings to the south-east and south of the cloister, one of which was probably the infirmary, were incorporated in the modern house. There was some ancient work in a gateway, called the Knights' Gateway, to the north-east of the priory. The holy wells, east of the church, were approached by a beautiful archway, c. 1200, which was removed here from one of the destroyed buildings.

The Greyfriars, Walsingham.

Of this picturesque building Dr. Hamilton Thompson remarked that it consisted of two courtyards. The smaller court, on the south, was entered at the south-west corner, and had covered passages with rectangular traceried windows on its east and west sides. The east passage might have communicated with the infirmary and other offices, of which there were traces on the east and south sides. The passage on the west led to the cloister court, on the north side of which was the church. Of this and of the eastern cloister-range there were only fragments, and little was left of the refectory; but the walls and gables of the western range were left and showed that it was of unusual size. The friary was founded in 1346; but the remains, so far as their date could be identified, seemed to belong to the next century.

East Barsham.

East Barsham Hall, built by Sir William Fermor, 1512-1515, and now being judiciously restored by its present owner, Mr. W. Colman, under the supervision of Mr. M. Page, was also visited. Here the Italian influence is even more pronounced than at Great Snoring Rectory. Pietro Torrigiano, or Peter Torrisan, as he was called in England, who was entrusted by Henry VIII with the erection of Henry VII's tomb at Westminster, was probably the designer of the ornamentation on both houses.

Norfolk Rood Screens.

The evening meeting was held at St. Ethelbert Gateway, when Mr. F. E. Howard delivered a lecture on Norfolk screens, illustrated by many lantern views. Mr. Howard said, considering the artistic merit of the mediæval screens of Norfolk, it was amazing that so little had been written about them. Many of them were in an appalling condition, and some appeared to be regarded simply as lumber by their custodians. There were about 650 churches in Norfolk, and 250 of these or thereabouts had screens. The lecturer first dealt with the screens of the fourteenth century, and pointed out that there were two chief types, one in which the tracery was supported by a series of turn shafts, and the other with the uprights treated as pinnacles. The Norfolk screens of the fourteenth century were notable for the beauty of their tracery, especially the roses or wheels over the doorways. The fifteenth-century screens fell into two groups—the square-headed, which had coved or flat soffits to the rood loft, and the arched screens, which were vaulted. The screens at Ranworth and Attleborough were particularly fine specimens of fifteenth-century screens, and the lecturer drew particular attention to the remains of the rood loft at Fundenhall and also of that at Tottington.

The tour on Friday comprised a trip by motor-launches on the Norfolk Broads, and, with the exception of the visits to Ranworth and Ludham, it partook more of the nature of a holiday excursion.

Mr. Heward Bell having been compelled to leave, the Presidentship was assumed by Mr. A. Hamilton Thompson.

Ranworth.

At Ranworth Church Mr. F. E. Howard suggested that in Norman days there was a long and narrow church, consisting of nave and chancel. The present chancel retained certain windows of the fourteenth century, but they seemed to have been re-used in a rebuilding or remodelling of the late fourteenth century or early fifteenth. Instead of adding aisles to the Norman nave, as would have been done in other parts of England, the builders of the early fifteenth century had built a huge structure, comprising, as it were, nave and aisles in a single span. They also added a western tower and north and south porches. A double hammerbeam roof was known to have been destroyed by faculty in 1705. Probably the font cover, of which a fine drawing remained in the church, was destroyed about the same time. The fittings were of the greatest interest. Besides a fine set of backless benches, disfigured in modern times, and considerable remains of the choir stalls, there remained a most interesting choir lectern, with desks at different heights. The rood screen was perhaps the most beautiful, though not the most elaborate, in Norfolk. It extended right across the wide nave, the side sections being treated as reredoses for the two side altars, with delightfully designed wings to protect them. Though the screen retained a larger portion of its loft, the greater part of its vaulting had been destroyed. The portion which remained was exquisitely painted with floral sprays. Nowhere else had the arrangement of the side altars been so beautifully preserved as here. But that arrangement of side altars and reredos was not unique in Norfolk. It was merely an example of quite a common thing. The screen he would date at 1450 or 1460. It did not stand alone as regarded style. There were other screens about here which were the work of the same hand. The style of the side reredos

was very much like a screen at Gooderstone. The restoration of the screen had hardly been happy, but so far as he knew nothing old had been destroyed. It was an interesting question as to whether the painting was contemporary with the screen, and whether it was the work of the same craftsman. He thought not, for he knew of three other screens distinguished by work evidently from the same clever hand.

Ludham.

Mr. F. E. Howard's address on Ludham Church stated that the chancel, of the first half of the fourteenth century, was probably a rebuilding on a much larger scale of the original Norman chancel. The west tower, rather later in style, must have been commenced quite clear of the older church. The fine aisled nave dated from the late fourteenth or early fifteenth century. The eastern four bays appeared to have been built first, the work being then extended to link up with the western tower. The roof of the nave was a hammerbeam example, relying for its stability on its long wall posts, which transmitted the thrust to the aisle roofs; these were of the same date and of flying buttress form. The chancel roof was modern. Of the fittings, the most important was the rood screen, dated 1493, retaining its original colour, including a fine series of saints on the lower panels. Above the screen was a mediæval tympanum, discovered in recent times in the rood-loft stairway. The actual painting probably dated from Marian times. Within the chancel were simple but dignified returned stalls on their original platforms. There was an interesting chest and a plain and massive alms-box. The font was a good example of the usual Norfolk type, with alternate evangelistic symbols and lions.

In the evening the visitors were the guests of the President and Committee of the Norfolk and Norwich Archæological Society at a reception held in the Keep of the Castle Museum.

Beeston-next-Mileham.

On Saturday the visitors saw some of the most interesting remains Norfolk has to show. The tour was in the district which the late Dr. Jessopp called the "Norfolk Holy Land" from the profusion of monastic houses to be found in it, *i.e.*, Castle Acre and the neighbourhood. The first stop was made at Beeston, which Mr. F. E. Howard described as "one of the most delightful structures of its kind in Norfolk," and "beautifully preserved after 500 years of neglect." There was originally a Norman aisleless church and chancel; the chancel was rebuilt about the year 1310, the nave somewhat later, and it is this fourteenth-century church that we see to-day. The flowing tracery in the windows is characteristic. The parclose screens, of both north and south chapels, at the east end of the nave, are well preserved, an unusual circumstance; some of the "choir-stall-like" seating remains. The southern screens date from 1400; the northern about 1475. The chancel screen is well preserved, the rood loft gone. The painting is original, and remarkable for its "landscape" instead of the usual diaper background. The church possesses a pre-Reformation paten.

Great Dunham.

We next arrived at the church of Great Dunham, considered by Professor Baldwin Brown to be one of the most interesting examples of late-Saxon work in the country. It has all the features of pre-Conquest work—high fenestration, central tower, triangular-headed west door (now blocked up), long and short work, very pronounced, and arcading. The latter in this case is interior, and may be compared with that at Bradford-on-Avon, which, however, is there exterior. The walling is thick for the period. The windows are double splayed. In the tower there are small circular openings, which is an Anglian feature and a mark of late pre-Conquest work. The belfry windows are divided by a mid-wall shaft with cushion cap.

Swaffham.

The interesting fifteenth-century church at Swaffham was next visited, and an address given by the Vicar, who exhibited some of the treasures of the church library, among them the famous "Black Book of Swaffham," an early Vulgate, and a beautiful little fifteenth-century Book of Hours.

Castle Acre.

After lunch the party proceeded to Castle Acre, where Dr. Astley described the earthworks and gave the history of the Castle; Mr. F. E. Howard said all that was necessary about the church; and Mr. A. Hamilton Thompson gave a *résumé* of the history of the Cluniac Order, and a description of the Priory, with the aid of Sir W. St. John Hope's excellent plan. All these may be found in Dr. Astley's "Guide to Castle Acre."

East Dereham.

On the return to Norwich a halt was made at East Dereham for tea and a brief inspection of the church to view the Seven Sacrament Font, much mutilated, and the Cowper Monument. The Vicar read an extract from the old church account-book, showing that the whole cost of the font in 1468 amounted to £12 13s. 9d., of which the stone cost £1, and the mason "for workmanship of the seyd funte" was paid £10.

The tour on Monday took the members to North Norfolk, where the churches of Sall, Cawston, Cley, and Blakeney, and the historic Blickling Hall were visited.

Cawston.

The first halt made was at Cawston, where an inspection of the church was made. Its chief features of interest were described by Dr. A. Hamilton Thompson. The chancel was built in the early part of the fourteenth century. About 1400 the west tower was built largely of freestone, on a site clear of the building. The chief interest of the church is its hammerbeam roof, remarkable for the tall figures of angels set in front of the struts between the hammerbeams and principal rafters. The screen, of the characteristic local type, has a series of painted panels. There is a large wall painting with a defaced inscription on a scroll in the south transept, which also has a ceiling with well-painted bosses. The ringers' loft in the tower remains. The church has a fifteenth-century pulpit.

Sall.

On leaving Cawston the party drove to Sall Church, which was also described by Dr. Hamilton Thompson. The chapel above the north porch retains its piscina and is vaulted. The church has a handsome series of choir stalls with carved misericordes, and the lower portion of the screen remains, with defaced paintings of St. James the Great and the Latin Fathers and remnants of the Nicene Creed painted on the sill above.

Blickling Hall.

Leaving for the time being the study of churches, the visitors went on to Blickling Hall, built by Sir Henry Hobart in 1620 on the site of an earlier house erected by Sir Nicholas Dugworth. A paper on the history of the hall and its chief features of interest was read by Canon Meyrick, who has long and intimate memories of the hall. The party spent some time in going through the rooms and gardens.

Cley.

At Cley Mr. A. B. Whittingham dealt with the architectural features of the church. It was during the fourteenth century, when Cley was a flourishing port, that the rebuilding of the church took place, but on a more magnificent scale, and it is for the work that was then done that the church is famed. A clerestoried nave was built wider than before. On each side broad aisles were made, with transeptal chapels at their east end. In the fifteenth century new windows and roofs were given to the aisles and chancel, and three porches were added. The south porch is a fine piece of work of 1400. In the room above is a rare contemporary iron-bound chest for the church valuables. The pulpit is dated 1611.

Blakeney.

The last place visited in the day's tour was St. Nicholas' Church in the adjoining village of Blakeney. Mr. A. B. Whittinghame acted as guide. He pointed out that the church was chiefly remarkable for its two towers, there being a small beacon tower at the north-east of the chancel in addition to a large one at the west end. The building was all of two dates. The Early English chancel was vaulted in two bays. Its east window was of seven lancets, but the three-light side windows had given way to others of Perpendicular date. At the east end a space was walled off to form a sacristy, and from this a stair ascended to the beacon tower and the space above the vault. The rest of the church was entirely rebuilt in the fifteenth century. The rebuilding commenced in 1434. This work consisted of a clerestoried nave with aisles, north porch, and west tower, the west bay and tower being a little later than the rest. Internally the building was quite pleasing with its hammerbeam roof, but externally the tower was not well-proportioned, and the rest of the work seemed rather poor. The beacon tower was rebuilt shortly afterwards.

The annual meeting of the Institute was held in the evening, when a very satisfactory report was read, after which Prince Frederick Dhuleep Singh read a paper on "Some Manor Houses in Norfolk."

The concluding day's tour took the visitors

The Newport Arch, Lincoln.

[This arch is probably the oldest of its kind in the Kingdom still serving its original purpose; it was built by the Romans.]

into East Norfolk, so that we may say that they have not left unsampled any of the best things which the county has to show of its wealth of antiquarian objects of interest.

Barton Turf.

At Barton Turf Church Mr. Arthur B. Whittingham explained that the church, which was mentioned in Domesday Book, was enlarged early in the fourteenth century by the addition of the present aisles and chancel. Later in the same century a small clerestory was built. Early in the fifteenth century various improvements were made. A new rood screen was erected at this time, which now formed the chief feature of the church. The paintings on its twelve lower panels represented the nine heavenly orders. At the east end was a painting of the descent of Christ, said to be by Van Dyck.

Tunstead.

At Tunstead Church Mr. Philip M. Johnston, referring to the fabric as the stately church of a vanished town, said the church is remarkable for its size, the internal measurements being: Chancel, 51 ft. 4 in. by 25 ft. 3 in.; nave, 87 ft. 2 in. by 24 ft. 10 in.; and aisles, co-terminous with the nave, 14 ft. 1 in. wide. As Tunstead gave the name to the Hundred, it was probably in Saxon times the capital town in it. There are records of walls, gates, and important houses and holdings, indicating a town of some size and importance, of which nearly every trace has vanished.

Worstead.

With regard to Worstead Church, which was next visited, Mr. Johnston said this church occupied about the same area as Tunstead Church, but while its chancel was wider and much shorter, it was flanked by important chapels, and that on the north had an original two storied sacristy to the eastward—a comparatively rare feature locally. The church was exceptionally rich in painted screens. The rood screen of ten openings retained its vaulted cove, and was erected between the years 1512-24.

From Worstead the party went on to North Walsham, where they looked round the church.

Bromholm.

On leaving North Walsham the party drove to Bacton for the purpose of inspecting the remains of Bromholm Priory. The Priory was founded in 1113 for a few Cluniac monks, and the Priory church was dedicated to St. Andrew. The oldest portion of the present remains is a block standing apart from the rest, which formed the north transept of the Priory church. The date of this portion is of the close of the twelfth century. The ivy-clad remains of the Priory offer many points of interest to the antiquary.

Mr. Johnston read a paper on the Priory written many years ago by Mr. Harrod, a former secretary of the Norfolk and Norwich Archæological Society, and added some account of his own of the Cluniac order of monks. In concluding his remarks he said the owner had expressed his readiness to permit any competent body to undertake the excavation of the site.

Dr. Hamilton Thompson, in referring to the ivy-clad condition of so much of the ruins, said that to talk about the beauty which clinging ivy gave to such ruins was purely an artificial idea. He did not think there was anything pretty about it. Ivy was extremely gloomy, and was fatal to stonework. If those ruins were to be properly preserved some means should be taken for removing the ivy from them.

Paston.

The visitors next drove to Paston, where the church was described by Mr. Herbert Loraine. The present edifice is not the original church of Paston. The existing building was erected early in the fourteenth century. It was restored notably in 1601, 1843, and 1869.

From the church the members passed to the manor barn, close by, which was built by Sir William Paston, whose tomb is in North Walsham Church. The barn is said to be the largest in the county.

The rest of the day's tour included visits to Mundesley, Trunch, and Knapton, which were described by Mr. Aymer Vallance.

Norwich.

On the last day of the meeting Mr. W. R. Rudd conducted the visitors to places of interest in the "City of Churches," including the "Great Hospital," with the cloisters, Eagle Ward, and Church of St. Helen; Bishop Bridge; Cow Tower; St. Andrew's Church; the Convent of the Black Friars, including St. Andrew's Hall (formerly the nave of the church), Blackfriars Hall (the former choir of the church), and cloisters; the City Bridewell (now the property of the city), and others—at all of which Mr. Rudd discoursed.

This brought a most successful week to a close. For the excellence of the arrangements all credit is due to Mr. L. G. Bolingbroke, who had also prepared a most attractive book of the programme, with plans of the principal buildings, full of information, to be carried away as a memento of the occasion. Thanks must also be accorded to all the organisers of the meeting, and to the various lecturers, whose descriptions added so much to the enjoyment and profit of the members.

SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS.

"Isis" writes as follows:—

SIR,—The recent controversy over the western towers of Canterbury which has taken place between Canon Mason and the S.P.A.B. has set some of us wondering. I find myself gasping in a rather stifling air of outworn phrases and doctrines when reading letters of the Secretary of the S.P.A.B. We all recognise the excuses for the attitude of the Society lying in the immense injury done to ancient buildings in the past through so-called "restoration," but is it not becoming a little hysterical and out of touch with life when it fails to do justice to the changes in public opinion for which its own good work is so largely responsible? Instead of recognising these and keeping an open mind, it appears to have fallen back on the reiteration of generalities and theories, so remaining out of practical touch with things. Moreover, it has set itself to assume as concluded, as stated by the Secretary, that no modern material is to be used in repairs, as when he says: "Tinkering with stone surface is as harmful to old masonry as the addition of modern stained glass to ancient stained glass windows." This surely needs some qualification, for it is not the fact. The numberless pieces of "matted" glass inserted in the windows at Fairford, for instance, to fill the gaps in the original stained glass are largely modern, and, though better than incompetent restoration, greatly disfigure the windows. The spirit in which the repairs are made determine the results much more than whether the glass used for repairs is new or old. Nor can one for a moment accept the view that in no circumstances should repairs include the restoration—in the right sense—of the original. The confusion seems to have arisen through the abuse of bad restoration which has reacted on the S.P.A.B. in the form of fixed ideas which mutilates its influence. It is quite open to question—though each instance must be judged on its merit and not by the imposition of fixed dogmas—whether the insertion of patches of matted glass, otherwise unpainted, in a painted window is at all satisfactory; nor is it the best that can be done. If it were possible it is certainly better to renew, in sympathetic treatment with the original window, the missing pieces—and why not? The cry of "forgery," where no forgery is intended, is beating the air, and the "falsification of history" only a grandiose commonplace. To give the ancient window more of its original appearance, to restore its beauty, is much more important than such history. Nor do I suggest that in the case of a largely perished window such restoration is desirable or possible, but in those cases where the repainting of a few pieces of the missing glass would complete the effect again it is of every advantage to repaint them. And it can be done when these matters are not regarded as matters of repair unworthy of an artist's attention, and the artist himself directs them. I have recently seen such repairs executed in the way I describe, wholly sympathetic and successful—much more successful than the purism that replaces the lost pieces with patches of new matted glass. I hold there can be no deception where there is no intention to deceive, and history may well, in such a case, yield to beauty, though no such yielding is really involved. And so with regard to stone work, it is the craftsmanship much more than the new stone that arouses objection to repairs made in such a way. It may be answered that sympathetic modern stone work is not obtainable. I doubt the truth of this, but were it so it does not make it undesirable, or, on the other hand, justify this superstition about old work, as though it were something not wrought by human hands which we must superstitiously worship. More alive to the need of the times, we should seek in such repairs for a treatment of the stone work more in sympathy with the old—and then, perhaps, "patches of hard-edged new stone" would not occur, and re-incarnation would more truly describe the results obtained. One has the feeling that the constant reiteration of outworn phrases about "forgery," "falsification of history," and "puerile imitation" does not help at all, and that their tendency is to harden into dogmas to the undoing of a good cause.

"SUGGESTED SANITATION."

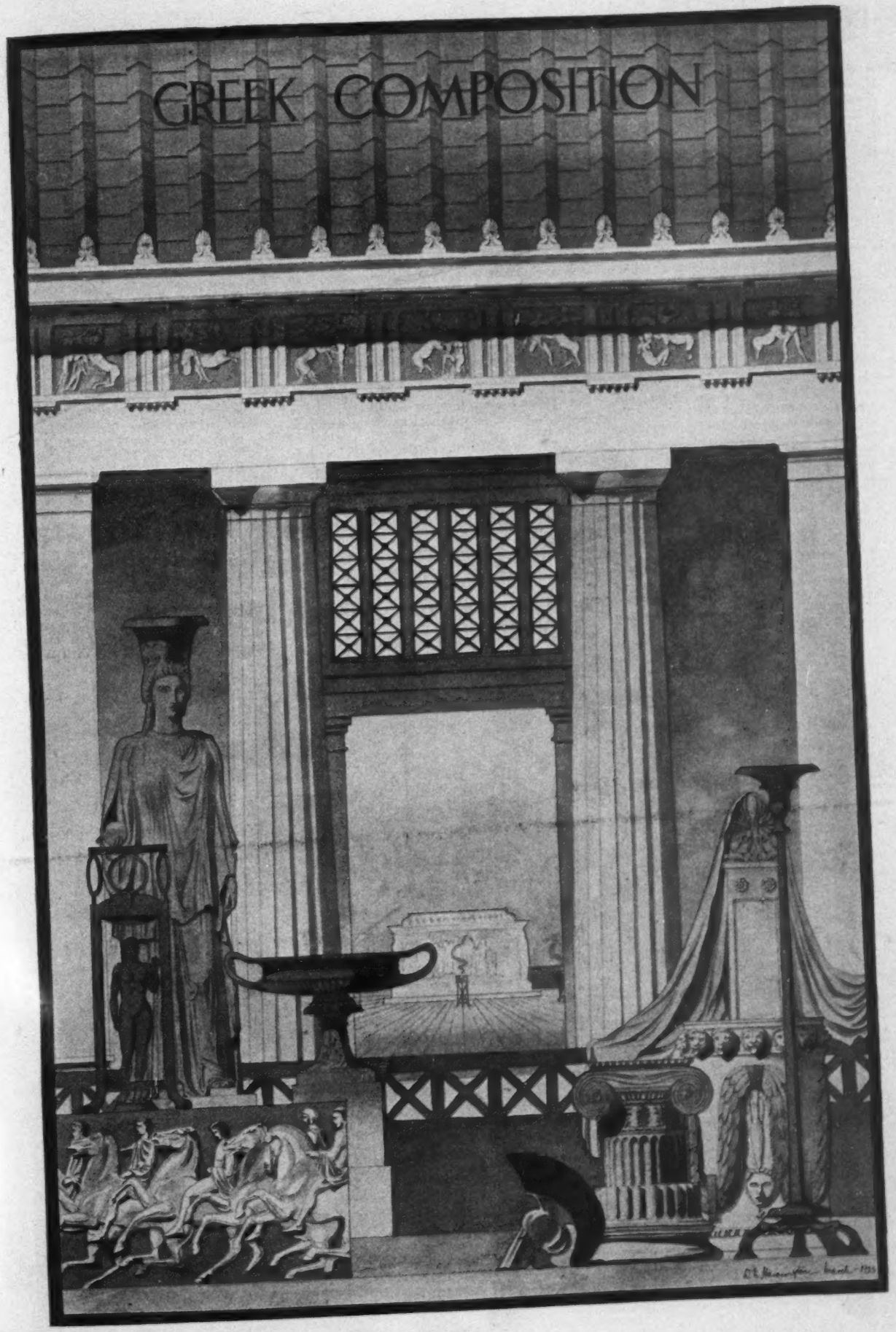
A correspondent ("Experimentia") writes:—

SIR,—We can increase the preservation of our health in all sewered towns in an economical manner, varied to circumstances, by naturally and mechanically inducing the air flow into the sewers, using every existing surface ventilator as an induction port, whereby all spores, insects, dust, bacteria, and deleterious air, &c., are driven into the sewer flow, and if desired through water spray, or a destructive jet flame, thus greatly mitigating fog. This scheme particularly applies to London.

Even the energy in sewage gravitation at some points may be used to drive the local propeller under control. Seaside towns, such as Brighton, could also flush their sewers with sea-water, and repeatedly use the gravitated water energy for ventilated induction as far as the outfall. Bureaucracy seldom initiates; we are burdened with academic coat and theory. I think we can apply some such practical effort, which could be gradually adopted in small units and sections to a concerted whole. It has also the merit of a remunerative proposition in its broad aspect.

Housing in Glasgow.

Under the new Rent Act vacant houses became automatically decontrolled, and the question arose whether these houses would be let at an increased rental. "There are,' states a Scottish contemporary, "probably 200 vacant houses in Glasgow, but several are large houses with rents from £90 to £300. Other houses, again, are not in a fit state for habitation. The City Assessor's Department had a list of 100 empty houses ready for occupancy with rents running from £10 or £12 to £80. Inquiry shows that, with two exceptions, these houses are being let at the former rents, and between twenty and thirty are tenanted. Some of the vacant houses, it is understood, are being offered for sale."



Greek Composition.

Design by MR. D. E. HARRINGTON (1st Year Student), Awarded First Prize, Day School of Architecture, Northern Polytechnic.

BOOK REVIEWS.

House and Cottage Construction. Vol. I. By H. Bryant Newbold, M.S.A., with special chapters by Guy Cadogan Rotherey, Paul Willoughby, F.S.Arc., E. W. King, G. J. Strange, and A. C. Martin, A.R.San.I. (London: Caxton Publishing Co., Ltd., Surrey-street, W.C.2.) Price 58s. 6d. the set of three volumes.

Mr. Bryant Newbold, in his book on "House and Cottage Construction," covers a much wider field than is usually the case with text books on this subject; he aims at laying before his readers enough general information to render them at the least intelligent and sympathetic critics of the architect's endeavours. In this connection his quotation from H. G. Wells' description of a writer's efforts is very apt. Like the writer, the architect has to revise continually his earliest ideas before a thoroughly satisfactory effect is produced. "The actual operation described by one well-known architectural designer as 'fooling about' consists of roughly blocking out the rooms required, having due regard to the conditions of site, &c. Over this rough drawing a piece of tracing paper is placed, and the whole thing gone over again. This operation is repeated, and repeated, until every possible solution has been tried, and the best has been found. So out of the 'slush' by 'fooling about' arises the finished article. And here a plea on behalf of the designer may be made. Should the client, in discussing the final sketch plans, find his architect somewhat irritable when faced with some brain wave by the client, the client will perhaps regard his irritation more leniently when he learns that the designer has spent perhaps several hours in considering this very brain wave in the fooling about process or slush stage."

It is this constructional meditation which marks out the expert designer from the novice. A design must be considered in relation to its site, its sanitation, its aspect, its subsoil, the position of the entrance drive, before the position of a single wall can be determined. Even at a later stage the design will probably have to be reconsidered again, remodelled in fact, to bring it within some stipulated limit of cost.

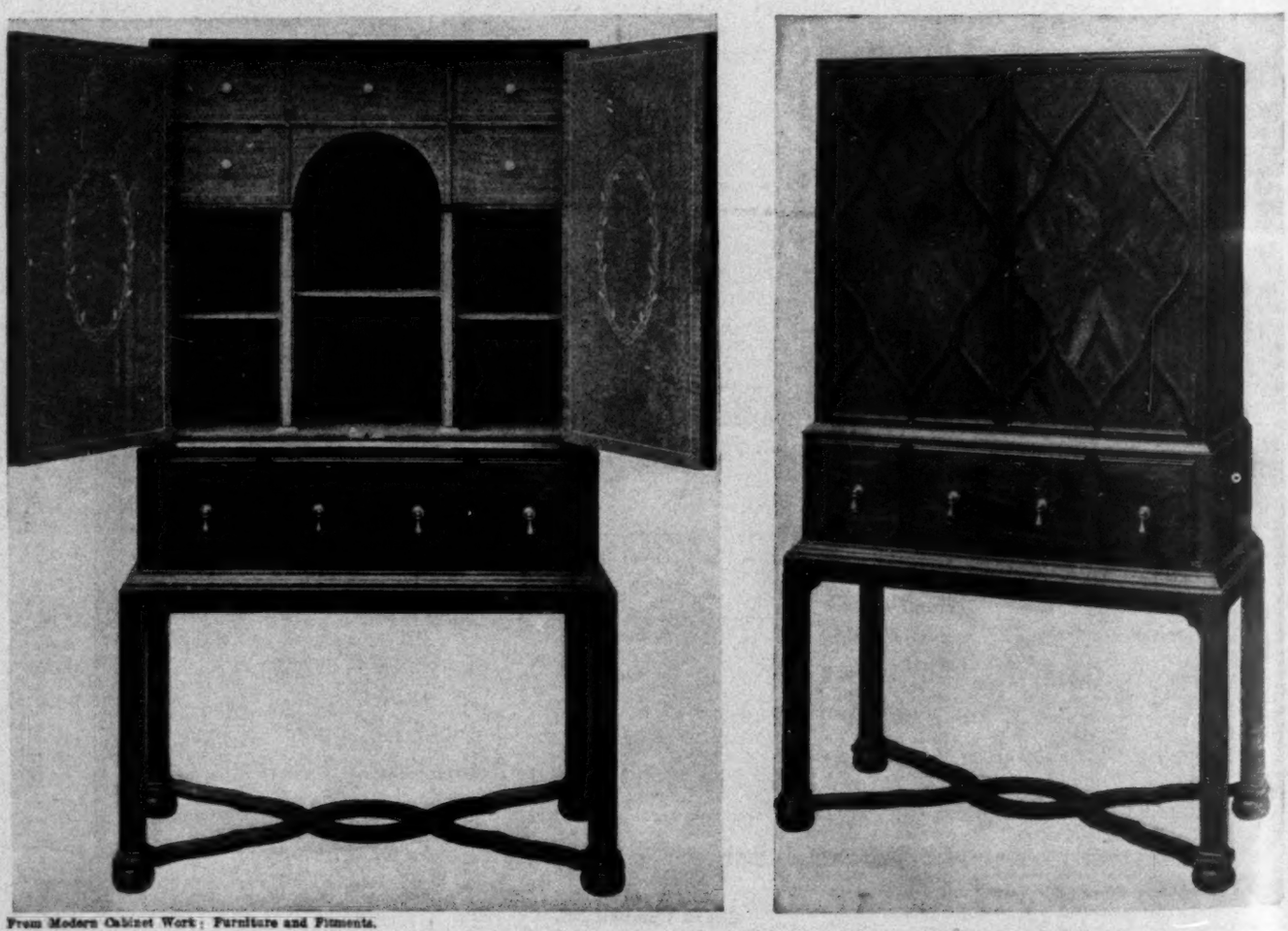
Mr. Newbold's criticism of the plans designed by a lady, on pp. 105–7, are very much to the point. The designer was obviously ill-equipped to deal with the necessary processes of revision or even to visualise the inconveniences of working in or even staying as a visitor in such a house. It is impossible for the amateur to have in mind all the many factors of convenience, construction and appearance that have to be combined to produce a work of architecture. A good housewife may and should know how to describe her chosen method of work to her architect in order that he may arrange the rooms in convenient positions to avoid loss of time, wasted space and needless wandering about the house, but this knowledge is the function not of an architect but of any good client who may reasonably be expected to explain the purposes of his business before requiring an architect to design premises to accommodate it.

The fact remains that neither housewives nor business men take sufficient interest in ascertaining what their own views of convenience really are, and Mr. Newbold will have done a notable service to architecture if he directs attention to this aspect of design based upon the practical necessities of the case.

Passing from the consideration of convenience to the consideration of beauty, the value of homogenity is very rightly emphasized. The stringency of the cost of building since the war has done something to help architecture to avoid needless fussiness due to the capricious employment of discordant methods, materials and colours in the same building, but the compulsion which has sometimes led to the erection of simple and suitable buildings will often result in the production of merely mean ones which inspire again a desire for detail to break the monotony as soon as times are easier and funds permit. The plainness of domestic architecture at the moment is a virtue derived from compulsion, and Mr. Newbold does well to endeavour to establish it upon a basis of rational choice. The details and fittings of houses and cottages are explained with great care and many excellent constructional devices whereby convenience can be made to go hand in hand with economy are illustrated in clear diagrams. Without necessarily agreeing with Mr. Newbold in all his personal preferences, the reader will certainly feel that nothing has been advanced from caprice, and that honest conviction and sound reasoning underlie the treatment of each detail of house and cottage construction contained in this useful and comprehensive book.

Modern Cabinet Work: Furniture and Fitments. By Percy A. Wells (Head of the Cabinet Department at L.C.C Technical Institute, Shoreditch; Silver Medallist Royal Society of Arts) and John Hooper, M.B.E. (Honours Silver Medallist, City and Guilds of London Institute). 3rd edition, revised, with additional illustrations. (London: B. T. Batsford, Ltd., 94, High Holborn) Price 25s. net.

So much is heard of antique furniture, the imitation of it, of the cunning tricks of the worm-hole artist, that it is a pleasure to find an excellent and authentic book on modern cabinet work reaching its third edition. It is difficult in a period of unrestful eclecticism to rival the productions inspired by an unbroken tradition when furniture and fittings were designed by masters imbued with a feeling for



From Modern Cabinet Work: Furniture and Fitments.

A Cabinet in Coromandel and Satinwood: Designed at the School of Arts and Crafts, and made by Mr. J. H. Brandt.

stateliness throughout a whole scheme, but some of the modern work illustrated demonstrates that new designs need not be in any way inferior to the old. (Plate xix.) A cabinet in coromandel and satinwood, designed at the L.C.C. Central School of Arts and Crafts, and made by J. H. Brandt, exhibits a mastery of the principles of colour composition in the disposition of the vigorously figured material, and two pieces by E. W. Gimson, a sideboard veneered with burr elm and a print cabinet in Italian walnut with raised inlay, would be distinctly pleasant items among one's household goods. Examples of historical styles are introduced for the sake of comparison, and beautiful as these undoubtedly are, the present fashion for the antique at any price is hardly justified by any dearth of good modern work. The constructional side of the craft is developed with the assistance of a great number of illustrations where the intricacies of cabinet making are set forth in the most comprehensible manner. The methods for ascertaining the true dimensions of bevels and of splayed and curved surfaces for the preparation and fitting of veneers are elaborated in a chapter on "Practical Setting Out and Applied Geometry." Theory and practice are dealt with together; shrinkage is provided for when the full-size setting out is made.

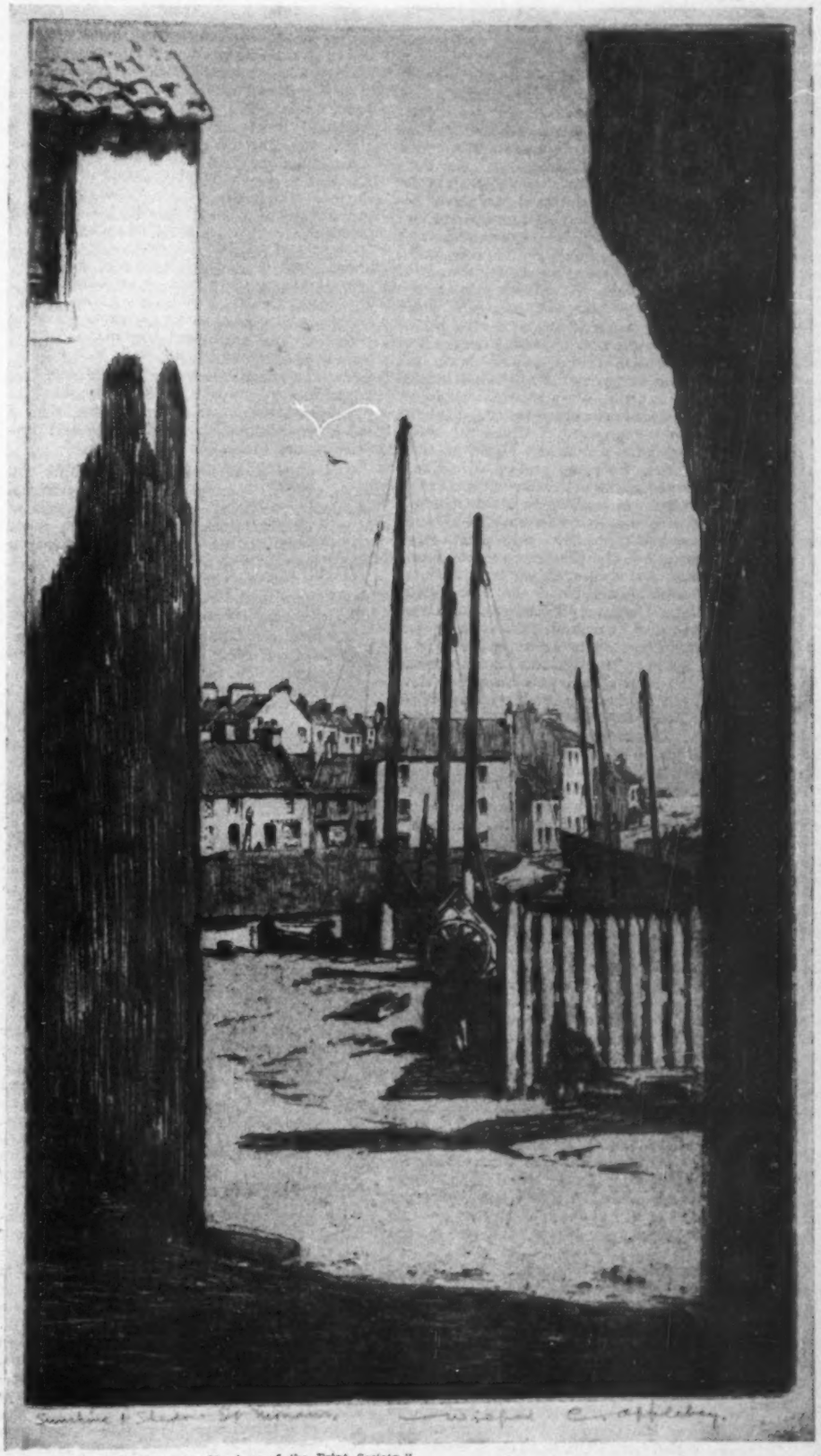
In the description of the geometrical groundwork of "an elliptical dome" the following practical instructions are given: "Dry, well-seasoned wood is, of course, an essential in this work, and it will be found advantageous to roughly cut the segments to shape first, and then allow them to stand about for some time until the shrinkage is quite complete before finally jointing and glueing up to shape." Among much other useful matter a chapter on "Constructional and Decorative Brasswork, Movements and Fittings" is particularly valuable, and the book is brought up to date in respect to material for cabinet making by the inclusion of a list of English, foreign and Colonial woods with three plates showing panelling and furniture executed in various Australian woods. The material for veneering is also treated of in Chapter IX in connection with the methods adopted in its application.

A glossary of technical terms and an index complete this useful work.

Sixty-six Etchings by Members of the Print Society. Edited by HESKETH HUBBARD, R.O.I., A.R.W.A. (Issued by the Print Society, Woodgreen Common, Breamore, Hampshire.) 21s. net.

It is a pleasure to look through this volume with its introduction by Mr. Kineton Parkes, which is most interesting and instructive, especially to those who have not the time, if they have the inclination, to study thoroughly a subject in which there is so much to be learned. Hints on framing, the display and care of prints, mounts, &c., are dealt with, and that important and mystifying term known as "states" is comprehensively explained and will enlighten many. Etchings are receiving more attention of late years and well they deserve it. It is to be hoped that the days of the so-called "furnishing pictures" are drawing to a close. So many a picture once on the wall, usually hung crookedly, is never looked at again; but once the taste for good specimens is developed, great and refreshing is the pleasure derived from one's purchases.

It is pleasing to know that the Society is endeavouring to advance taste for fine work, and this volume should help the novice and collector in making a choice; the specimens illustrated deal with varied subjects and will appeal to all tastes. To become a collector member is a simple matter. The merits of the prints illustrated are high, which make it difficult to select any for special mention, but we may mention some half-dozen. No. 1, "Sunshine and Shadow," by Wilfred Applebey; a view of a quayside or harbour, taken between two old buildings, effectively treated in sunlight and shadow. No. 15, "The Trawler," by Edward Charlton; a trawler putting to sea; the sea in the wake of the trawler is beautifully expressed, the whole is characteristic in its expression. Plate No. 24, "The Harrow," by George Gascoyne, R.E., is another pleasing specimen. Plate No. 33, "The Three Mills," by Hesketh Hubbard, R.O.I., A.R.W.A., is a decorative subject poetically treated, and the composition well considered. Plate No. 53, "The Three Scythers," is another attractive plate. No. 68, "The Silver Stream," by E. Marsden Wilson, A.R.E. (mezzotint), makes a strong appeal with its beautiful cloud effects. Many others are worthy of notice. Through the courtesy of the Editor, we are able to illustrate Plates No. 1 and No. 33.



From "Sixty-six Etchings by Members of the Print Society."

"Sunshine and Shadow." By MR. WILFRED APPLEBEY.

THE ROYAL SANITARY INSTITUTE.

ANNUAL CONGRESS—II.

MODERN BUILDING MATERIALS.

Mr. H. D. Searles-Wood dealt with materials and methods of construction which, although not new in the sense of having been recently discovered, were not in general use.

Sand-Lime Bricks.—These bricks were manufactured in large quantities in most European countries with well-known success, and also in the United States of America and Canada, where large quantities had been made for years past, and so important had the industry become that the manufacturers had combined and founded a "Sand Lime Brick Association" for their mutual help and protection. The process solved to a great extent the problem of producing a brick of first-class quality in localities where clay was not available. In the manufacture of sand-lime or calcium bricks, sand and lime of a suitable quality were thoroughly mixed in approved proportion. When thoroughly mixed and brought to the desired constituency by the introduction of water, the mixture was passed into metallic moulds and subjected to mechanical pressure. As the bricks passed from the machines they were packed by hand and started on a trolley and run into a hardening chamber into which, after having been sealed, steam was admitted to the pressure of which the bricks were subjected for a sufficient period of time. Sand-lime bricks for many years past had been manufactured by a large number of firms in this country and it was confidently anticipated that the existence of a British Standard Specification would conduce to uniformity in practice and give confidence to the purchaser and the user.

It was of the utmost importance that the material used should be of the best quality obtainable. The sand selected might be bank sand, freshwater river sand, drift sand, or sand or sandstone crushed or an approved mixture of these. A good practical rule for fineness was that all the sand should pass through a sieve having 2,500 meshes per sq. in., about 85 per cent. retained upon a sieve having 10,000 meshes per sq. in. Generally speaking, the sand should consist of grains of assorted size, and so graded as to give the greatest density of material. When a coarse sand was used suitable means should be provided either before or during the mixing operations for reducing it substantially to the above fineness.

The most suitable lime was a high calcium lime containing 90-95 per cent. of calcium oxide and not more than 0.5 per cent. of magnesium oxide. The lime must be thoroughly hydrated before or after admixture with the sand; the ratio of the weight of dry hydrated lime to the total weight of dry hydrated lime and dry sand was usually not less than 7½ per cent. nor more than 12½ per cent. Whether the lime and sand be mixed by weight or by volume, care should be taken to see that (1) the required ratio of lime to sand was consistently maintained, and (2) that the mixing ensured the lime being disseminated thoroughly throughout the mass.

The average crushing strength when dry should be not less than the following:—Engineering bricks, 2,800 lbs. per sq. in.; bricks for external walls, 2,000 lbs. per sq. in.; bricks for internal walls, 1,000 lbs. per sq. in. The average crushing strength when tested wet should not fall below the figures specified for the first two classes by more than 20 per cent. and for the third by more than 30 per cent.

Concrete.—After referring to the different methods of concrete building construction, he said hollow concrete floors were now much used. In one system of this type of floor construction, instead of the usual collapsible core which was withdrawn after the formation of the hollow concrete slab around it, each of the floor units consisted of a pre-cast reinforced concrete beam formed around a perforated metal hollow core which was left permanently embedded. The beams varied from 12 in. to 16 in. in width and from 5 in. to 10 in. in depth, and were appropriately reinforced according to span between supporting walls or joists, and nature of load to be carried. The advantages were obvious. Instead of a centralised plant, establishment and transport charges, all the operations for the production of the beams could be carried out by any reputable contractor on the actual building site or at any convenient spot adjacent thereto. The metal for the cores was delivered cut to sizes in flat sheets, and by means of a simple apparatus was bent into the required shape. The main reinforcing bars—delivered cut to lengths—were attached thereto, thus giving a complete "coring and reinforcing" unit around which each beam was cast in moulds used repeatedly throughout the job. The fact that the metal cores were left permanently embedded gave each beam—and consequently the completed floor—additional strength and rigidity, whilst the whole process of production was simplified and rendered speedy and economical. The speed with which the floor could be erected enabled the general contractor and subsidiary trades to make rapid progress. The floor was much lighter than a solid floor of equal strength. A material saving in dead load was, therefore, effected. A further advantage—particularly in hospital, school, or commercial buildings—was the elimination of noise, in addition to temperature and fire-resisting properties.

The units could also be employed for flat roofs, external or internal walls, and partitions, stairways, landings, &c., the advantages of speedy erection, strength with lightness, sound and temperature resistance, applying as in the case of floors. With a slight modification, lintels and sills could be similarly produced, having a finish equal to the best masonry work, with a distinct saving in cost.

Another recent development was the manufacture of cast-iron pipes and concrete pipes by centrifugal action. In the manufacture of reinforced concrete pipes by the centrifugal method a thin sheet-iron mould was built up, inside which a spiral wire reinforcement was fixed. The mould was then placed on vertical rollers which caused it to rotate at a high speed. Suitable concrete was then thrown in and built up to the required thickness. The concrete became dense and the water was occluded owing to the influence of centrifugal force. After a few minutes' spinning, the pipes were placed in a steam bath and left for eight hours, when the concrete was sufficiently hard to allow the outside mould to be removed. The pipes were then placed in the open to season for four weeks. The effect of the spinning was to produce an extremely dense concrete which should effectively protect the reinforcement and give a thoroughly waterproof pipe. The pipes were normally tested up to 150 lbs. per sq. in. By the time the final spin had been completed, all the excess air and water in the concrete had been draining out by the action of centrifugal force. After the first spin the concrete mixture in the mould was so hard and dense that it was impossible to make an impression with the thumb on the side surfaces. Another interesting feature was that the centrifugal process imparted abnormally smooth internal surface to the pipes, thus reducing frictional losses to a minimum.

An interesting comparison was recently published concerning the external tests carried out on various stoneware and concrete pipes. It was a well-known fact that concrete increased in strength with age, which rendered the following comparison all the more remarkable: A concrete pipe, one year old, of 18 in. diameter, of 3 ft. length and of a thickness of 1½ in., was tested to a breaking load of 1,345 lbs., equivalent to a load of 2,448 lbs. per ft. run. That pipe was compared with another stoneware pipe, which gave under test 1,400 lbs. per lineal foot. The concrete pipe tested was non-reinforced, and only three weeks old, of the same diameter and thickness, but of 4 ft. length instead of 3 ft. A breaking load of 10,622 lbs. was applied, equivalent to a load of 2,656 lbs. per foot run, as against 2,448 lbs. and 1,400 lbs. respectively.

White Lead Paint.—The subject of lead poisoning amongst house painters had for many years been a matter of acute controversy, and a large number of Government inquiries had been carried out in various countries into the medical and technical aspects of the problem. There had been much difference of opinion as to the extent to which poisoning took place, and in particular as to how far symptoms frequently attributed to lead were to be more properly ascribed to other causes, such as the inhalation of turpentine and other volatile thinners. Discussion had also turned on the question as to how the danger of lead poisoning could be met, whether by way of regulations, in methods of use, or by prohibition of the use of lead paints. The all-important conclusion which had been generally agreed was that the chief cause of poisoning amongst painters was the inhalation of lead dust. The question was discussed at the third International Labour Conference of the International Labour Organisation of the League of Nations, which met at Geneva in October and November, 1921, and as a result of that discussion a Draft Convention was drawn up which was to be submitted for the consideration of the legislative authorities of the various countries which were members of the League of Nations.

The Draft Convention proposed regulations for the use of paints containing white lead and sulphate of lead, and these regulations were directed towards:—

(1) The prevention of the dangers arising from dust caused by (*a*) the dry rubbing down of lead paint, (*b*) the spraying of lead paint, (*c*) the use of white lead and sulphate of lead in dry or powder form.

(2) The provision of means for personal cleanliness.

(3) Medical examination of workers and notification of cases of lead poisoning.

In regard to the painting of the inside of buildings, where it was considered to be difficult to make regulations effective, and where the use of lead paints was considered less imperative, the Convention purposed to prohibit the use of lead paint after November, 1927, except in cases such as industrial establishments, railway stations, and other places where the use of lead paint was considered necessary.

Under the Convention, the regulations should come into effect on January 1, 1924. The British Government, it was understood, was anxious to introduce regulations as soon as possible, and at a series of conferences recently held between representatives of the Home Office and the Painters' and Decorators' Industrial Joint Council of Great Britain, Draft Regulations were prepared with that end in view.

Of these regulations the most important was probably III, which prohibited dry rubbing down or scraping of surfaces painted with lead paint and aimed at preventing cases of lead poisoning due to the inhalation of dust. It had recently been shown that it was unnecessary to rub down by the dry process, because the work could be done as effectively by the use of pumice stone after moistening the surface with water. That was applicable, not only in the case of old paint, but with intermediate coats, even within a few hours of the application of the paint. Certain cases, such as the intricacies of door mouldings, presented difficulties in the use of pumice stone, but that could be overcome by the use of waterproof sandpaper, of which several varieties, all suitable and satisfactory, were now obtainable.

Amongst other important regulations were those dealing with cleanliness; there could be no doubt that if persons using lead-containing materials would wash their hands before handling food and attend to the cleanliness of the mouth, the risk of poisoning could be greatly reduced.

Discussion.

In opening the discussion on this paper and Mr. Falethorpe's paper on "Concrete in Municipal Work" (given in our last issue), Professor E. R. Mathews, M.Inst.C.E., said

that concrete linings for pipes formed a splendid preservative; it did not add to the cost, and was to be recommended.

Mr. SHENTON expressed the opinion that engineers did not take sufficiently into account the crushing tendency of the weight above underground pipes.

Mr. WHITTAKER (Croydon) explained that suitable sand for making sand-lime bricks was only known to exist in Kent and Surrey and parts of Suffolk; so far as he knew it was not to be found north of those districts. He urged engineers to experiment with other sands in order to adapt them for the purpose of manufacturing sand-lime bricks; he thought any sand which made a good foundry sand would be suitable.

Mr. CAMPBELL (Edinburgh) said that the difficulty of obtaining ordinary bricks would probably be solved if the sand-lime brick were developed. He also referred to the utilisation of oil shale for making bricks in West Lothian.

Another speaker said it was difficult to get a builder to use a brick which had not been burnt. In Surrey there seemed to be a tendency to use sand-lime bricks for internal walls only, and he would like to know how they weathered.

Professor E. R. MATHEWS urged engineers not to use concrete tubes unless they were reinforced and unless they had been cured for at least six months.

Another speaker urged that, on account of its cheapness and adaptability, concrete and reinforced concrete should be used in municipal work wherever possible. The cost of shuttering could be much reduced if it were used several times. A great economy was obtained by the use of concrete fence posts, telegraph posts, and gullies.

Mr. FRANK (Plymouth) said it was of paramount importance to use the correct amount of water in manufacturing concrete, as an excess of 10 per cent. of water would weaken the concrete by as much as 50 per cent. He strongly advocated the use of the slump test for determining the consistency of concrete.

Mr. W. C. FENTON, F.R.I.B.A., said he had had a remarkable instance of the strength of reinforced concrete in a warehouse he had built. For that building the floors had been designed to carry a load of 3 cwt. per ft. super., and on visiting the building he found one of the floors carrying 10 cwt. per ft. super. There was, however, no trace whatever of any cracks, although it was only six months after the building was erected. He had worked on a factor of safety of 4, and the fact that the floor had successfully withstood a load 150 per cent. in excess of that showed, he thought, that the factor of safety of 4 which was theoretically necessary was in excess of what was practically required. He had recently built a block of offices in Sheffield of monolithic concrete with a thin veneer of granite on the face of the walls; by that method of construction a saving of 25 per cent. was made on the cost of the shell, and in addition the building was more efficient than if it had been built of stone. He also referred to a church at Goldthorpe which had been carried out, together with the vicarage, entirely in reinforced concrete. The building had a most effective appearance, and no material could have been more suitable for the purpose as the ground in the neighbourhood was liable to subsidence.

HOT-WATER SUPPLY AND SLUDGE DISPOSAL.

In a paper with the above title (which was taken as read), Mr. A. J. Martin, M.Inst.C.E., explained that sludge disposal and hot-water supply, although apparently unconnected at first sight, had an important bearing on each other.

The paper stated that sludge contained a respectable amount of combustible matter. Samples of Birmingham sludge dried at 212° F. gave calorific values of 4,120 and 4,893 B.T.U. respectively, or one-third of that of coal. Herr Elsner, in "Treatment and Utilisation of Sludge," stated that briquettes made from dewatered Frankfort sludge, air-dried to 10 per cent. of moisture, gave an effective calorific value of 4,500 B.T.U. per lb. Sludge as it left the tanks contained always a very large proportion of water, often 90 per cent. or more. In that state it would not burn; but it would do so readily if its water-content were reduced by air-drying. During the coal strike of 1912, and again in 1920, a large quantity of air-dried sludge was used to supplement the coal burnt in Lancashire boilers at Birmingham. It was found that, generally speaking, 1 lb. of sludge would raise at least 1 lb. of steam.

Another way of utilising the combustible matter in sludge was to convert it into gas. The sludge might be carbonised in retorts, as was done with coal. The sewage works at Chorley were lighted for some time with gas produced in that way from the pressed sludge, the average yield being 7,000 cu. ft. of 20 candle-power gas per ton.

Gas was also produced by the spontaneous decomposition of the sludge. The sewarge works at Exeter were lighted for many years with the gas from the septic tank; the Leper Hospital at Matunga (near Bombay) pumped its sewage, lighted its buildings and compound, and cooked the patients' food by the same means. Parramatta had for some years pumped the whole of its sewage with the gas from its septic tanks.

The main source of that gas was the cellulose, in the form of paper and vegetable fibre, which constituted a large proportion of the organic matter in sludge. The gas was produced by the decomposition of cellulose by anaerobic bacteria. Omelianski had succeeded in isolating two organisms which had the power to decompose cellulose, the one producing hydrogen and the other methane or marsh gas.

Records of the yield of gas from septic tanks were somewhat scanty; and many of the figures given were unreliable through the absence of proper facilities for collecting and measuring the gas. Observations of the yield over short periods would generally be misleading, for the gas was not liberated continuously, but accumulated in the sludge, from which it broke away at intervals, more particularly when the relief of pressure due to a fall in the barometer caused the imprisoned bubbles to expand. The temperature of the sewage also had an important bearing on the amount of gas produced. At Manchester in 1901 Professor Fowler obtained 1 cu. ft. of gas per 100 gallons of sewage, or 0.61 cu. ft. per head per day. The yield at Exeter was roughly estimated at 1 cu. ft. per head per day. In Mr. James' opinion it would be safe at Matunga to count on an average volume of from 3 to 4 cu. ft. per head per day. Three cu. ft. per head was reported from Parramatta.

It was not necessary to generate the gas in the septic tank itself. The retention in such a tank of large quantities of sludge which was periodically thrown up into the sewage by the evolution of gas was not conducive to the clearness of the effluent. A better plan was to remove the sludge from the tank at short intervals and to digest it in a separate chamber. The digestion of sludge in an independent tank had been carried on in many places for some years, not with a view to the production of gas, but for the purpose of reducing the volume of the sludge and rendering it inoffensive and non-putrescent. That is done on a large scale at Birmingham; and in that case the question of gas production had been lost sight of.

Birmingham produced every year not less than 400,000 tons of sludge, containing over 27,000 tons of dry solid matter, of which 9,000 tons were gasified during digestion, yielding 320,000,000 cu. ft. of gas. That was within a small fraction of 1 cu. ft. per head per day for the whole population of the sewerage district. There was every reason to expect the calorific value of the gas to be from 650 to 700 B.T.U. per cu. ft. The money value of such gas was very considerable. The Gas Light and Coke Co. was selling gas of 500 B.T.U. at 9.2d. per therm, or 3s. 10d. per 1,000 cu. ft. At the same price per therm, the 365 cubic feet produced in one year per head of population would be worth 1s. 9.8d.; or at 3s. 10d. per 1,000 cu. ft., 1s. 4.8d. The corresponding figures for a town of 50,000 people would be £4,500 and £3,500; for Birmingham, with its population of 948,000, £86,000 and £66,000; and for London, with 5,342,000 people, £485,000 and £374,000 respectively.

The yield of gas might be increased in case of need by the addition of waste paper, &c., to the sludge; and there was always the alternative of generating the gas by distilling the sludge in retorts.

Discussion.

Mr. WATSON (Birmingham) said the process of turning the gases from sludge into heat was quite practicable, but careful attention should be given to all the conditions before money was invested in such work. Such gas was valuable for the production of power, and he had gone so far as to install a gas engine of 25–30 h.p. which worked on such gas for two or three hours per day. He was not quite satisfied that the process was an economical proposition, otherwise he would have installed a gas holder to impound the gas which was allowed to escape into the air.

Mr. EDWARD WILLIS (Chiswick) said he had used sludge in road construction in a low-lying district. The sludge was carefully placed in layers in conjunction with destructor clinker, and when it was opened up again some years later it was found that wedges had to be used to break it; it had become a very hard concrete. He was not quite sure that the utilisation of the gas from sludge was an economical proposition.

NEW METHOD OF LAYING DUST.

A paper, on "Dust Laying by an Emulsion of Oil and Bitumen," was read by Major-General Sir George K. Scott-Moncrieff, K.C.B. He said dust, usually created by some of the processes of civilised life, was characterised by want of cohesion between the particles and increased area of surface tension. It was in some cases of a combustible character and a fruitful cause of explosion in mines, &c., also a danger to health.

The remedy usually adopted of treating the dust with water was unsatisfactory, because of rapid evaporation, and in mines that remedy was not always permissible because of the condition of the natural strata. Water was an inefficient means of treating dust. The ideal liquid in mines was one which contained a small quantity of solvent and had a low-surface tension.

For work on roads a binding element was necessary to provide cohesion in the dust, and that binding element was found in bitumen, which was capable of being melted into a liquid form, and under certain mechanical treatment could combine with oil to form an emulsion.

Thus, there were three elements involved in the emulsion, *i.e.*, water to act as a conveyor, oil to act as a lubricator and transmitter of interfacial energy, and bitumen as a binding element. An emulsion sufficiently stable to be transmitted from the place of manufacture to the place of application, and then locally diluted with water, had been found effective.

The experimental use of that emulsion in mines was still under investigation, but so far it had been found satisfactory in many particulars, and further experiments as to its prevention and the transmission of explosions were now under preparation.

In municipalities the use of the emulsion had been found to result in great saving of water for keeping down dust in streets, and on country roads the emulsion, mixed with nine or ten times its volume of water, and sprinkled by a water-cart in the ordinary way, had been found remarkably effective. The further application of the principle to factories, shops, refuse heaps and so on, had not yet been extensively tried, but there was little doubt that it would be found to be as efficacious as in the case of roads and mines.

Presentation.

Major Lionel D. Lewis, who lately resigned the position of Surveyor to the Abertillery U.D.C., upon appointment under Ministry of Transport, was, with Mrs. Lewis, the recipient of a presentation at a meeting recently at Abertillery.

REINFORCED CONCRETE GRAND STAND AT BLACKHEATH.

THE Blackheath Football, Cricket and Lawn Tennis Co., Ltd., are to be congratulated on obtaining such an excellent structure in the new reinforced concrete grand stand which has just been completed to accommodate spectators at their ground at Rectory Fields, Blackheath, S.E., which we illustrate in this issue. The stand was designed by Messrs. Walter Bridges & Co., consulting engineers and architects, of Parliament-street, S.W.1, and constructed under their supervision by Messrs. A. Roberts & Co., Ltd., builders and contractors, of 74, Earl's Court-road, W.

The stand is 300 ft. long and 30 ft. wide, while the terraces in front, which extend along the whole of the length, form an additional forward extension of 25 ft. A roadway at the rear, 20 ft. in width, gives access to the stand, lavatories, offices, &c., underneath the stand, and also provides a parking space for cars.

The structure will accommodate 1,800 spectators seated in the stand and about 3,500 on the terraces in front. There are commodious and well-lighted offices and lavatories underneath the stand, and drainage has been laid for additional dressing-rooms, baths, &c., which it is proposed to erect at a future date.

The original stand, a timber structure of about half the size of the present building, was practically demolished by fire last summer, and the owners have now replaced it with a permanent structure in reinforced concrete, which has a minimum of fire risk and requires the least possible maintenance.

The illustrations show the substantial proportions of the structure, the rigidity of the construction, and the treatment of the exterior. The effect of the completed structure is happily not spoilt by an array of advertisements which it is customary to plaster over football stands nowadays.

The columns are of various sections, from 10 in. by 10 in. to 14 in. by 14 in., dependent upon the unbraced length, the degree of fixity at the footings, and the load to be carried; they are arranged in three rows, approximately 15 ft. apart, with 10 ft. centre to centre between columns in each row.

The treads of the steppings of the stand were made in 3 in. pre-cast reinforced concrete slabs, which were erected on to ledges formed in the pre-cast riser beams and provided with rebates 6 in. by $\frac{3}{4}$ in. at back and front, in which projecting expanded metal reinforcement from the risers was laid and afterwards grouted in. In this manner the advantages resulting from the use of pre-cast members were obtained without sacrificing to any great extent the continuity of monolithic construction.

The steelwork of the superstructure was manufactured and erected by Messrs. James Allan, Senr., & Sons, of Glasgow. Trusses are spaced 10 ft. centres, and each is supported at the back of the stand on short steel stanchions of 12 in. by 5 in. British Standard section well anchored, so as to resist the whole of the horizontal wind stresses.

The trusses at the front are supported on light lattice girders of 30 ft. span, which are bolted to stanchions arranged so that the rectangular down pipes fit into the bosom of the joists.

The risers of the reinforced concrete steppings to the stand are 1 ft. 3 in., and the width of tread 2 ft. 9 in., this latter being somewhat unusually large, but providing much greater comfort for the spectators. The actual proportion of tread to riser was ascertained after a careful study of the levels of the field of play, and the slope calculated so that all spectators have an uninterrupted view of the near touch-line.

The front valance boarding was kept sufficiently high to enable the back row of spectators to see the ball throughout its trajectory when punted near the stand.

The terraces in front of the stand are constructed of steps 6 in. by 15 in., the lower nine being formed by a solid bank riveted with timber and the upper seven steps of reinforced concrete spanning 9 in. brick walls at 10 ft. centres.

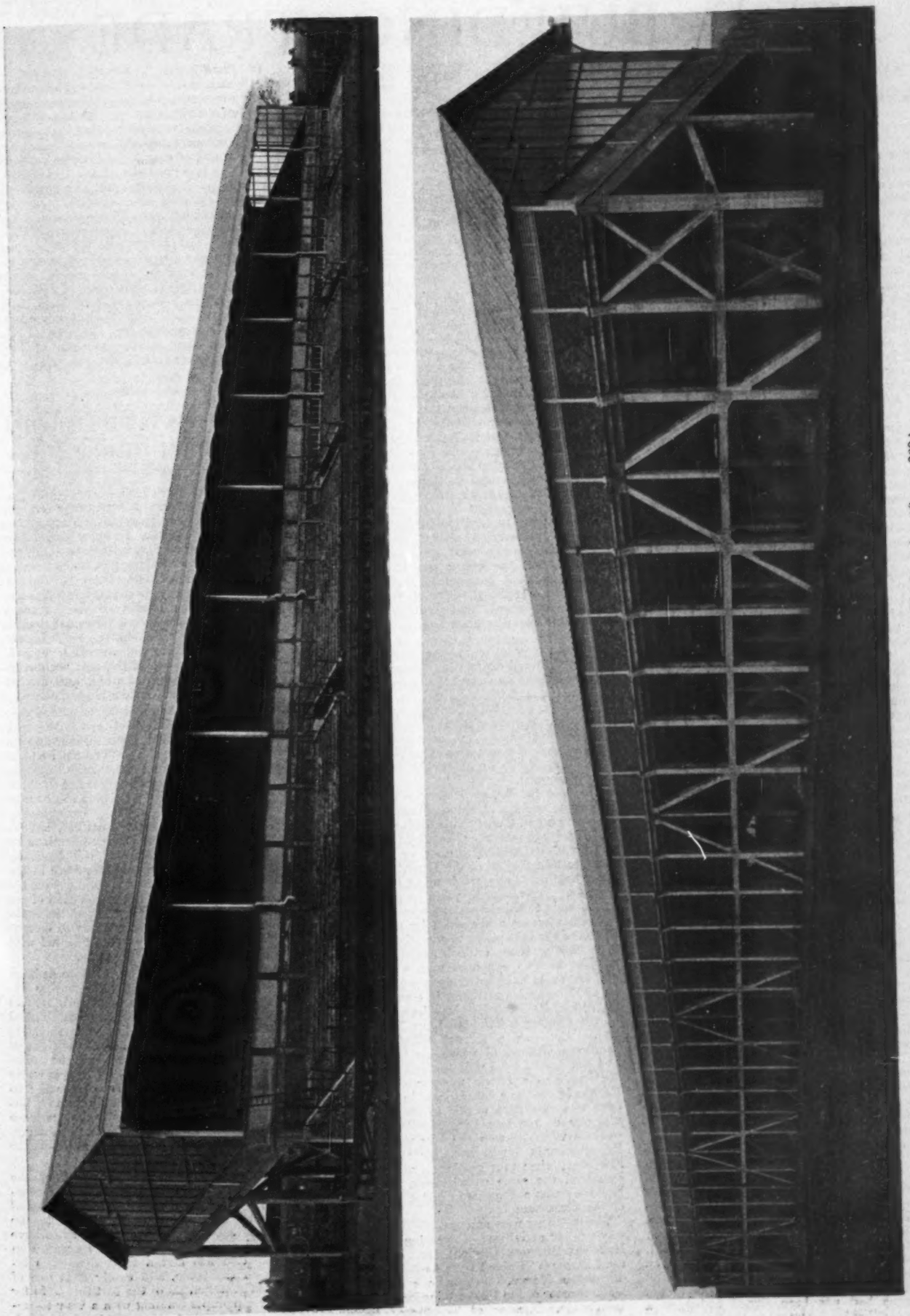
An independent test made on specimens of concrete taken from batches mixed for the actual job showed excellent results. Three 6 in. cubes were tested, and gave the following crushing strengths per sq. in. at 29 days: 3,940 lb., 4,020 lb. and 4,010 lb., an average of 3,990 lb. The proportion of the concrete was 1 part Portland cement, 2 parts sand, and 4 parts ballast, graded so that the largest particles passed a $\frac{1}{4}$ in. ring.

ACQUISITION OF BREWERY PROPERTY.

Mr. J. D. Wallis, Official Arbitrator, sitting at Doncaster, heard a claim by John Smith's Tadcaster Brewery Co. against the Borough of Doncaster, concerning the Corporation's acquisition of premises in St. Sepulchre Gate and West Leith Gate.

The Official Arbitrator has awarded that the acquiring authority is to pay the owners the sum of £3,945 as purchase money and compensation, and the fees on the award, and £60 towards the costs of the owners.

Reinforced Concrete Grand Stand at Blackheath.



Reinforced Concrete Grand Stand at Blackheath. (See p. 260.)

THE BUILDING TRADE.

SPECIFIC PERFORMANCE: RECTIFICATION OF MISTAKE.

We may draw attention to two important decisions in connection with specific performance of contracts. In Craddock *v.* Hunt (*Weekly Notes*, April 14, 1923) the Court of Appeal held (Lord Justice Younger dissenting) that, where owing to a mutual mistake in reducing a verbal agreement for the sale of land into writing, the written agreement failed to express the actual bargain between the parties, with the result that a piece of land which had been in fact bought and paid for by the plaintiffs was wrongly conveyed to the defendant, who had notice of the plaintiff's title, the Court since the Judicature Act, 1873, had jurisdiction to rectify the mistake in the conveyance, notwithstanding that the deed conformed strictly with the written agreement, and although the effect of ordering rectification was to grant specific performance of a written agreement with a parol variation.

We take the above statement from the headnote of that case in the *Weekly Notes*, and the case has now been followed by the Privy Council in the case, The United States of America and Another *v.* Motor Trucks, Ltd. (*Weekly Notes*, August 11). The respondent company, in 1918, had contracted to machine high explosive shells for the appellant Government, and the contract contained provision for the contract being cancelled when the war terminated, and for certain payments to be made to the company, which were to include reimbursement for the cost of buildings and plant which the company had to provide to carry out their contract. Notice to terminate the contract having been given in November, 1918, at the termination of the war, certain sums were agreed, which included 376,496 dollars in respect of land and buildings. This agreement was subsequently incorporated in a formal document, the material portion of which was "Title to all property specified in Schedule A hereto annexed shall vest in the United States immediately upon execution of this agreement."

The land and buildings, however, were not mentioned in the schedule. The sum agreed having been paid, the Government claimed the land and buildings, but the company denied the right to possession. The American Government then brought this action, claiming rectification of the schedule by the inclusion of the land and buildings and specific performance so rectified of the contract. The case was tried in the Courts in Canada, and the judge had found that the intention of the parties was that the land and buildings should become the property of the American Government, and made an order for performance of the contract. The Appellate Division had reversed this judgment, but the Privy Council have restored it. It was held that the omission to include the land and buildings in the schedule to the agreement was the result of mutual error; but, there being an actually concluded agreement, it could be enforced after rectification consistently with the Statute of Frauds, and the case of Craddock *v.* Hunt was approved. In Canada there is a statute similar in terms to the Judicature Act on this point.

It will be observed that in both these cases there was a definitely concluded verbal agreement, which represented the true intention of the parties, but which through a mutual error had not been incorporated correctly in the formal contract, but the principle would not be extended, we imagine, where there was any dispute as to the terms of the original agreement. In our Legal Section, June 29, we gave an instance of another kind of mistake in a note on Horner *v.* Walker. In that case the formal document had not been signed owing to a wrong part having been sent to the purchaser.

THE LATE SIR HENRY HOLLOWAY.

In our last issue we briefly reported the death of Sir Henry Holloway, J.P., and give herewith an account of his career. The late Sir Henry Holloway founded in 1882 at Battersea, with his brother, the late H. Thomas Holloway, the business of Holloway Brothers, builders and contractors. After a few years hard work the business developed rapidly, and in 1900 more important works premises were acquired on the riverside in Belvedere-road. In 1897 the firm obtained their first really important contract, viz., the building of the new Naval Barracks at Chatham for the Admiralty, at a cost of nearly half-a-million. This contract was carried out to the entire satisfaction of the authorities, and was the forerunner of many large and important contracts, including the London Wall Building Estate (a large block of offices in Finsbury-circus) the amount of the contract being about £400,000; the Central Criminal Court, Old Bailey, on the site of the old Newgate Prison; the New General Post Office and Sorting Office; Messrs. William Whiteley's new stores in Queen's-road, Bayswater; the Admiralty Offices and the large block of Government Offices adjoining St. James's Park. In addition to the large public buildings enumerated above, the firm has also carried out several important housing contracts, viz., the garden city at Rosyth for the Admiralty, a contract of £650,000; the housing scheme for the city of Winchester, a contract of about half-a-million; and a scheme for the Wandsworth Borough Council at Earlsfield.

During recent years the firm has also developed a civil engineering contractors' business, and many important works such as docks, shipyards and bridges have been undertaken successfully. In 1915 the firm again had to move their premises from Belvedere-road to their present site at the corner of Vauxhall Bridge and Grosvenor-road, owing to the acquisition of the former site by the London County Council.

The late Sir Henry Holloway was a past-President of the London Master Builders' Association and also of the Institute of Builders, and J.P. for the County of London. During the war Sir Henry was called upon by the Government to take control of the Department set up for providing temporary housing for munition workers. For about 1½ years he gave himself unsparingly to this important work and carried through what was recognised by many people as one of the best pieces of administrative work done during these critical times. For these services he was honoured with a knighthood and few could have better deserved the honour. In addition to his activities in connection with the firm of Holloway Brothers, he was chairman of the Limmer & Trinidad Lake Asphalt Co., Ltd. He was, a fervent adherent of the Wesleyan Church, of which his father before him had been a local preacher and class leader. He was also a strong temperance advocate. He was in politics a Liberal, and in his younger days was an ardent worker in the cause. He was one of the late Lord Moulton's keenest workers when he won the Clapham Division. He afterwards fought hard for Mr. Reginald McKenna, when that gentleman unsuccessfully contested the same constituency. Sir Henry Holloway was a Freemason and a Past-Master of the Streatham Lodge.

The following were amongst Sir Henry Holloway's many activities:—Governing Director of Holloway Brothers (London), Ltd., chairman of the Limmer & Trinidad Lake Asphalt Co., Ltd., director of Messrs. Chubb's Lock & Safe Co., Ltd., director of the United Kingdom Provident Institution, Director of Temporary Housing under the Ministry of Munitions for about twelve months in 1916-1917; received knighthood in 1917 as recognition of his services to country. On several occasions he was consulted by the late Ministry of Health on the housing question, and, with others, made recommendations which resulted in the subsidy being granted to house builders; was a member of the Government Trade Dispute Disqualification Committee appointed to deal with cases arising out of trade disputes affecting the Unemployment and Health Insurance Acts; member of the Panel appointed by the Government for finding employment for ex-officers; Past-President of the Institute of Builders and London Master Builders' Association; chairman of the Joint Committee of the Federation of Civil Engineering Contractors and Public Works Contractors; founded a scholarship for students of the Architectural Association; governor of Leys School, Cambridge; J.P. for the County of London.

THE INSTITUTE OF BUILDERS.

Mr. F. J. Gayer writes:—

Sir,—The criticism of Mr. Stone on the Institute of Builders' examinations appears to fall into the usual error of being destructive rather than of being constructive, and the criticism in general would appear to be founded upon an "immature consideration" of the real facts. Mr. Stone suggests that the syllabus was promulgated without reference to the many building institutions and educational bodies, whose suggestions might have been of great value. The Institute did, in point of fact, collaborate with several of the best authorities on technical building education, and are indebted to them for their valuable assistance.

Mr. Stone's remarks might be considered very much more appropriate if the syllabus now launched by the Institute was intended to replace all and every scheme of technical education for all and sundry; whereas the Institute, catering for the prospective master builder, very rightly decided that admission to its ranks after this year can only be by examination. Hence they, like any other Institute, have a perfect right to lay down the qualifications by which entry can be made to the Institute. It is common knowledge that there are in the country about 14,000 federated employers in the building industry, and it is the intention of the Institute to secure their recruits from the ranks of the above, and not at this stage to enlarge the scope to include every one connected with the many branches of the Institute.

There is nothing new in an institute defining the conditions under which its members are created; in fact this had ruled since 1834, and the only variation now sought to be established is that entry shall be by examination only. It is possible, even probable, that in the light of experience certain modifications may be necessary in the Institute syllabus, but if it is borne in mind that the Institute is not seeking to revolutionise all courses of building study, but rather to define those subjects that experience has taught to be essential to the master builder, then much of the adverse criticism falls to the ground.

Mr. Stone criticises the judgment of the Institute in attaching some importance to book-keeping and accountancy costing, &c. Had Mr. Stone's walk in life placed him in the position of a builder, he would long since have recognised that the amount of ignorance in this direction has had a most disastrous influence on the trade, and surely it is one of the fundamental duties of the Institute to foster and develop proper training with a view to uplifting the industry to the high level to which it rightly belongs.

NATIONAL FEDERATION OF BUILDING TRADES' OPERATIVES.

PRESIDENT'S ADDRESS AT THE ANNUAL CONFERENCE.

In his address at the annual conference of the National Federation of Building Trades' Operatives, held at Ilfracombe on Wednesday, Mr. George Hicks, the President, said:—

The present, said a thinker, was the knife-edge of the past cutting into the future, and that was a thought which he might use to convey the further idea that the great value of a conference such as that was the opportunity given by it to consider the events of the past year as a guide to future actions. The National Federation of Building Trades' Operatives, with every constituent body, had passed through a year of no little anxiety. The middle of April this year marked, as they knew, the highest point of crisis in the building industry, when a stage of negotiations had been reached that seemed to make hostilities inevitable. Those threatened hostilities were averted at the last moment, and an agreement arrived at which, so far as the wages question was concerned, had fructified in the arbitrament now in operation. Obviously a compromise, the settlement so far fell short of what their members would have wished to prevail, and in many quarters dissatisfaction was frankly expressed. It was to be understood, but it touched a question of fundamental importance—one that had been raised in other industries as well as theirs—that was to say, the entire position of negotiations as a principle. He took the opportunity of that opening address to examine the matter in the light of what was practical truth, pleasant or unpleasant. In the first place, negotiation with employers was not a cheap and easy method of getting their own way. If they were strong enough they could get their own way by fighting for it at the price of a fight. Employers who met them in conference brought no gifts. It was pull-devil pull-baker, or more appropriately, building worker, with the result invariably (on large issues) of compromise. The word sounded unpalatable, but it was no use for any of them to imagine that wages and conditions negotiation would exist at all if the facts were otherwise. The employers would be fools to come in, and so should they be, merely to argue about what was inevitable by sheer strength of organisation.

What, then, was the worth of negotiation? He left them to judge, but he asked them to judge on business lines. If every strike were successful, if no direct action ever ended in compromise, there would be no argument. But was it so? What they had to form their judgment about was this: taking success and failure together, and the varying measures of both, in past conflicts throughout industry; taking also their own resources and prospects, were they in the long run likely to get more by one form of compromise, negotiation, than by what must be (unless they could be invincible) another form of compromise, *i.e.*, the aggregate outcome of strikes? They must do one thing or another. It was not possible to pick and choose or to say "We can win this issue or that by a fight." There must be common purpose and loyalty, or the cause of the industry as a whole was bound to suffer. They, whose duty it was to carry on pourparlers and to exhaust the possibilities of arrangement, felt as keenly as any of the rank and file the injustice of being forced to accept reductions below the sliding scale adopted in 1921. That was the crux of the matter and a source of legitimate grievance. The earlier variation, they would remember, was agreed to in consideration of a period of stabilisation of wages during which there was every possibility of the cost of living figures dropping substantially below the rate thus stabilised. But it was not just a gamble entered into in any spirit of challenging fortune. It was the issue of a struggle, but the best they could achieve in the circumstances, and one in which Clause 14 C of the document figured to their disadvantage. The recent award of the Arbitrator served to emphasize the same fact. As an award crowning the general negotiations it was favourable to them, since it whittled the employers' demand down by about 75 per cent. He was not more satisfied than them to see the conditions of their industry depreciated. Nevertheless, there was a lesson that labour throughout the country was beginning to learn, that of unity against sectionalism. It was not the weakness of officials, but unpreparedness, backwardness of organisation, lack of common purpose.

On the general question of building trade standards there was one question he wished to refer to which affected the whole country, and the government of the country, as seriously as it affected the building industry. Few people realised how serious the reduction was in regard to the attractiveness of the industry when they faced the fact that population was racing houses and gaining rapidly. If all the available labour was put on to building houses at once it would take a score of years to catch up in that race, according to any tolerable measure of housing accommodation. That was the position as things stood. But a fact of greater gravity remained. It was common knowledge to them that building was not to-day attracting new blood sufficient to compensate for the natural loss of man-power due to the passage of time. What that meant to the nation ought to be plain to the minds of those who had the nation's affairs and destinies in charge, except that foresight seemed no more to be a quality of statesmanship than public interest a concern of capitalism. It was at such a time that the attempt was made to filch from the building operative the small advantage gained as a result of improved organisation over the conditions that prevailed in 1913. The best authorities on housing outside the building industry were agreed that good conditions must be established if the present numerical strength was to be kept up, let alone increased, and the point of view was laid down explicitly at the last conference in London of municipal representatives convened by the National Housing and Town Planning Council. He warned those who had any shred of responsibility in that matter that they were drifting to a condition where the limit of possible overcrowding would be reached, and this country would have not only an unemployed margin but literally a houseless margin, which would mean desperation and potential barbarism. The fact that fathers were ceasing to apprentice their boys to their trade in anything like the number of former times, and that apprenticeship wages were ridiculously low was a striking commentary on the supposition of relative prosperity in the building industry.

It was to be recorded with considerable satisfaction that officials of the National Federation were invited to sit upon the Special Committee on Building Materials' Prices which was appointed by the Government to watch the building rings, with particular regard to the State subsidy. That the proposal to spend public money to encourage house building would lead to inflated prices, which, if not checked, would absorb the whole of the subsidy, was taken for granted by every responsible person and apparently by the Government. But merely to hold a watching brief under the present terms of reference was not even a case of locking the stable door after the steed had been stolen. It was asking the thief to purloin the harness as well. The terms of reference must be enlarged to the extent of enabling the Committee not only to demand the production of business ledgers and accounts wherever required, but also to make definite proposals for legislation according to what was necessary for effective control. It was amazing that, with a problem so vital to the industrial efficiency, general health, and social morality of the nation confronting the executive to-day, a handful of grasping profitmongers should be allowed to stop progress in the name of private enterprise. That was what it meant. What municipality—or, for the matter of that, what ordinary builder—was going to plan house erection or town development at a loss to fill the pockets of the trusts? The race might be poisoned in filthy slums, just as it might be battered and even annihilated in future wars, so long as "business is business" to-day no matter what the consequences to-morrow. Their demand was for nothing more ambitious than moderately decent living conditions, and without those it was shown the industry could not live. If they were to be denied upon the ground that it did not pay to feed and clothe them properly, what was to be done to the commercial vampires who drained even the life-blood infused into the industry's veins by State surgeons?

Turning to their domestic affairs once again, he thought they would agree that prospects of closer unity were growing rapidly. The discussions that had taken place between the Amalgamated Society of Woodworkers and the Amalgamated Union of Building Trade Workers were an indication of the progressive tendencies in existence and the present position of those negotiations was a matter upon which congratulations were due. Industrial unionism meant one union for one industry and was an alternative to craft unionism, which meant one union or more for each separate trade. Ever since the miners (together with their dispute) were "settled" in the Spring of 1921, the movement in support of industrial unionism had grown rapidly, and the work of the General Council recently in bringing unions of associated interests together in conference promised far-reaching results. Some of the difficulties to be overcome were technical; others depended for solution upon education and sufficient of the industrialist spirit in the unions. The case for industrial unionism rested upon facts of capitalist organisation, which were plain to everyone. In the business world enterprise was not in the main split into crafts. Even where specialist distinctions existed the tendency to amalgamation of interests, or at least very close federation, was prominent. Sectional jealousies and even serious competition were beginning to be eliminated for the sake of common advantage. Between employers there was a stronger sense of affinity than ever. Trusts, rings, joint directorships and joint stock helped to complete the process of breaking down the old solid exclusiveness of the individual master. Workers of all crafts within one industry or more were brought together on the job, under the same control, exposed to the same conditions, good or bad, and working to the same end.

Industrial unionism was the inevitable answer of organised labour to modern developments of capitalist industry and finance with their political connections. The task before them was to find within each body of organisations an administrative scheme that, granting the desire for amalgamation, would be acceptable to the separate units, and that meant taking account of and dealing with the peculiar difficulties that in the past had influenced opinion adversely and given arguments for the propaganda of those whose interests lay in preventing union. That large amalgamations had taken place where, prior to the event, societies were diverse in machinery, funds, craft interests and schedules of benefit, proved that, if the will existed, the way was to be discovered. Probably the most important of the difficulties to be dealt with was of the craft. Craft was, like nationality, a matter of temperament, tradition and pride. But if all those were submerged in a wider outlook, or at least adapted to fraternal necessities, there still remained the practical workaday interests of the craft that men in the trade considered themselves best fitted to decide upon. A great deal of the opposition to amalgamation that was met with arose from fear, especially in the case of specialised crafts, that such interests might be overlooked or deliberately neglected. Beyond that were questions of workshop

management, for instance, more important to the craft itself than might be the case to the industry at large. Those matters were familiar enough to everyone who had been engaged in conference or negotiation with a view to amalgamation, and in some cases where union had been accomplished they remain sources of undesirable friction.

Closer unity, however, need not spell the submerging of legitimate craft interests, and he was convinced that it was within the practical wit of trade unionists to find ways of guaranteeing reasonable independence and even a considerable measure of trade autonomy whilst securing that common organisation and movement which events proved more and more every day to be necessary in the larger issues. The future was with those who would sink what was petty and rise to the higher call of human fraternity and industrial freedom. The National Federation of Building Trades Operatives had done and was doing fine pioneer work for closer unity, patiently serving the interests, separate and communal, of all trades concerned. That experience and lesson would bear rich fruit as time went on in proving that they could work together as comrades for great and enduring ends. With their industrial effort and all the promise it afforded there was disappointment in store for those who believed that trade unionism could be separated from political matters with advantage or without injury. The history of the past century showed that conditions affecting labour could be vitally improved by labour legislation and injured by legislative neglect; the facts of the immediate present were eloquent of what might be achieved by wise co-operation of industrial and political power. Labour was ready to mount the saddle—the race was for economic freedom. That end was not industrial only, nor political only; it was both, transformed into the people's co-operative State.

THE SMALL DWELLINGS ACQUISITION SCHEME.

AT a meeting of the Maldens and Coombe Urban District Council, held on August 9, Councillor Kirk (Deputy Chairman of the Small Dwellings Acquisition Committee) reported on action arising out of applications made by local builders and contractors for the recommendation of the local authority to the Minister for the benefit of grants by way of lump-sum payments as set forth in the Housing Act and Circular 388.

The Ministry of Health had replied that the Minister was not satisfied on the information before him that the need for houses proposed could not be met without assistance.

The effect of the decision (said Councillor Kirk) was to stifle building operations and end all confidence with the Government department and, moreover, place the county and even the country in a grave competitive position. In short, the promise of a subsidy was an essential factor to encourage, secure, and complete the house ownership difficulty, and had already had marvellous self-help quickening power.

The Council passed a resolution expressing its surprise and disappointment at the Ministry's decision, and pledged itself immediately to approach all local authorities within the county with a view to entering a county protest against the restricted and prejudicial action of the Minister and his advisers in excluding houses of a type and size specified in Section 1 of the Housing, &c., Act, 1923, and which in the opinion of the local authority is suitable to the needs of the area.

The Council urged that a Conference of local authorities and interested bodies be convened by the Thames Valley Councils' Association to determine county action immediately replies are forthcoming.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the rates of wages in the building trade in England and Wales. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur :—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Brick-Masons' Labourers.	Plasterers Labourers.
Aberdare	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bath	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Bedford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4	
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Bridgwater	1/3	1/3	1/3	1/3	1/3	1/3	1/3	0/11½	
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Burton-on-Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Cambridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Chatham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Chelmsford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Cheltenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Colchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Dudley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
E. Glam.(Mon. Vall.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½	
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Gloucester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0	
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Grays	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½	
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Great Yarmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0	
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Ipswich	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Lancaster	1/6	1/6	1/6	1/6	1/6	1/3	1/6	1/1½	
Leamington Spa	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4	
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
London	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/3½	
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Luton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Maidstone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Norwich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Oakham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Oxford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½	
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Reading	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0	
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Rochester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Rugby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
St. Albans	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
St. Helen's	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Scarborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Southend-on-Sea	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Stroud	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	0/11½	
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Swindon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0	
Taunton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Torquay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½	
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Walsall	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Windsor	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½	
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½	
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	
York	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½	

(For rates of wages in the Building Trade in Scotland, see page 265.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING AND PAINTING

AUGUST 18.—**Bristol.**—FLATS.—Erection of two blocks of flats at Lawford's Gate, for the T.C. Housing Department, 51, Prince-street, Bristol. Deposit £2.

AUGUST 18.—**Newcastle-on-Tyne.**—NURSES HOME.—Erection of a large nurses' home on the Dunholme Site, Westgate-road, for the Board of Guardians. Mr. Gladstone Walker, Clerk, 127, Pilgrim-street, Newcastle-upon-Tyne. Deposit £10.

AUGUST 18.—**Southend-on-Sea.**—CLUB.—Erection of club premises for Southend Labour Institute Society. Mr. N. Evans, architect, 27, County Chambers, Weston-road, Southend. Deposit £3 3s.

AUGUST 18.—**Treorchy (Glam.).**—REPAIRS AND PAINTING.—For effecting general repairs to and painting externally of 76 houses at Treorchy, and three houses at Treherbert, for Mr. L. Baron. Mr. W. D. Morgan, M.S.A., Architect, 199, Ystrad-road, Pentre (Rhondda).

AUGUST 18.—**Willington.**—HOUSES.—Erection of 30 houses on the Willington Dene Housing Site. Messrs. Hays & Gray, AA.R.I.B.A., Wingate, Co. Durham.

AUGUST 20.—**Aylesbury.**—OFFICES, &c.—For new offices and council chamber in the Butchers' Market. Mr. W. H. Taylor, Borough Engineer, Town Hall, Aylesbury.

AUGUST 20.—**Barnsley.**—PAINTING AND CLEANING.—The Committee of the Barnsley Liberal Club invite tenders for the cleaning and painting of its premises. Secretary, Market-street, Barnsley.

AUGUST 20.—**Coventry.**—REPAIRS.—Provision and fixing of new eaves, gutters and rain-water pipes, at Whitmore Park Hostels, for the T.C. Mr. J. E. Swindlehurst, City Engineer, Council House, Coventry. Deposit, £1 1s.

AUGUST 20.—**Cowdenbeath.**—HOUSES.—Erection of 10 additional houses in Stenhouse-street, for the T.C. Mr. C. A. Alexander, Burgh Surveyor, Town House, Cowdenbeath. Deposit £2 2s.

AUGUST 20.—**Dover.**—PAINTING.—For painting and incidental work at the Isolation Hospitals, Tower Hamlets, and Poulton, for the T.C. Mr. Wm. Boulton Smith, Borough Engineer, Maison Dieu House, Dover.

AUGUST 20.—**East Ham.**—CONVERSION.—For the conversion of open-air swimming baths in Central Park into dressing rooms, &c. Mr. J. Birch, Borough Engineer, Town Hall, East Ham, E.6. Deposit £1.

AUGUST 20.—**Edinburgh.**—VARIOUS WORKS.—For works at Bangour Village Mental Hospital, for the District Board of Control, viz.: (1) Painter work of houses of staff and Massage Department; (2) minor additions to waterman's house and house at No. 30 Dechmont; (3) erection of revolving shutters in verandahs of Homes 9 and 10, and the repair of screens in verandahs of Homes 7 and 8. Mr. James D. Gibson, Surveyor, 60, Frederick-street, Edinburgh.

AUGUST 20.—**Islington, N.19.**—ALTERATIONS AND ADDITIONS TO LAUNDRY BUILDINGS AND PLANT.—(*a*) Alterations and additions to the laundry buildings; (*b*) alterations and additions to the plant and machinery, &c., in the laundry at the Infirmary, Highgate Hill, N., for the Guardians of the Poor of the Parish of St. Mary, Islington, in the County of London. Mr. Edmund J. Harrison, Lic.R.I.B.A., 23, Berkeley-road, Crouch End, N.8. Deposit £2.

AUGUST 20.—**Leeds.**—HOUSE.—Erection of a house on the Weetwood Estate, Headingley, for Mr. G. D. Lumb. Messrs. Jones & Stocks, architects, 56, Prudential Buildings, Park-row, Leeds.

AUGUST 20.—**Markethill.**—REPAIRS.—For extensive repairs to the Mullaghbrac Roman Catholic Church, near Markethill, Armagh. Messrs. W. H. Bryne & Son, architects, 20, Suffolk-street, Dublin.

AUGUST 20.—**Middleton-in-Wharfedale.**—VARIOUS WORKS.—(1) Painting, (2) road-making, and (3) boundary wall, gates, &c., at Sanatorium, for the West Riding C.C. Health Committee. West Riding Architect, County Hall, Wakefield.

AUGUST 20.—**Nenagh.**—HOUSES.—Erection of eight houses, for the U.D.C. Town Clerk, Nenagh. Deposit £2 2s.

AUGUST 20.—**Penistone.**—VARIOUS WORKS.—Works at Penistone Grammar School: (1) New floor in cookery room; (2) conversion of gymnasium into class-room and class-room into gymnasium. Education Department, County Hall, Wakefield.

AUGUST 20.—**Rhyl.**—HOUSES.—Erection of 12 houses, on Vale-road site, for the U.D.C. Mr. A. A. Goodall, surveyor, Rhyl.

AUGUST 20.—**Walthamstow, E.17.**—HOUSES.—Erection of a total number of houses not exceeding 100 at Higham Hill site, Billet-road, Walthamstow. Contractors may tender, for two or more houses, for the Walthamstow U.D.C. Mr. G. W. Holmes, A.M.I.C.E., Engineer and Surveyor to the Council, Town Hall Annexe, Orford-road, Walthamstow, E.17.

AUGUST 20.—**Woolfold.**—PAINTING.—For painting at Wesleyan School. Mr. G. F. Camm, 6, Lamel-street, Tottington.

AUGUST 21.—**Cape Town.**—RESIDENCES, &c.—For erecting residences for men and women, Principal's house, and other contingent works at the site of the new University buildings, Groote Schuur, for the University Council. High Commissioner for South Africa, Trafalgar-square, London, W.C., and Messrs. Hawke & McKinlay, and C. P. Walgate, The Rhodes Buildings, St. George's-street, Cape Town. Deposit £10.

AUGUST 21.—**Chelmsford.**—SHELTER, &c.—For the erection of a shelter, convenience, and dressing room for ladies in the Recreation Ground, for the T.C. Borough Engineer, Municipal Offices, Chelmsford.

AUGUST 21.—**Islington.**—GARAGE.—Erection of a garage at Studd-street, P.O. Stores, Islington, N., for H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit, £1 1s.

AUGUST 21.—**Knaresborough.**—COVERING SHED, &c.—For stripping and re-covering with new galvanised corrugated iron sheets asphalte shed at Howe Quarry, and for painting at Howe Quarry, for the R.D.C. Mr. Chas. F. Smith, Clerk, Union Offices, Knaresborough.

AUGUST 21.—**London.**—PAINTING WORKS.—For the execution of painting works at the South-Western District Post Office, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

AUGUST 21.—**Oxford.**—EXTENSION.—Extension (for Telephone Exchange) of Oxford Head Post Office, for the Commissioners of H.M. Office of Works. Contracts' Branch, H.M. Office of Works, King Charles-street, London, S.W.1. Deposit £1 1s (payable to the Secretary).

AUGUST 21.—**Ton Pentre (Rhondda).**—PAINTING, &c.—For painting and decorating the Workmen's Hall, Library and Institute at Ton Pentre, for the trustees of Maindy and Eastern Collieries Workmen. Mr. W. D. Morgan, architect, 199, Ystrad-road, Pentre.

AUGUST 21.—**Walsingham.**—PAINTING.—For external painting of 12 houses, for the R.D.C. Mr. W. O. Humphrey, Surveyor, Fakenham.

AUGUST 22.—**Bacup.**—FILTER HOUSE.—Construction of a filter house, &c., for the T.C. Mr. W. H. Newton, Borough Engineer, Municipal Offices, Bacup. Deposit £3 3s.

AUGUST 22.—**Londonderry.**—COTTAGES.—Erection of 57 cottages in rural district. Ministry of Finance (Northern Ireland), 15, Donegall-square West, Belfast. Deposit £1.

AUGUST 22.—**Saxmundham.**—ADDITIONS, &c.—For new lavatories, cloak-rooms, and other alterations, repairs and redecorations at the Market Hall. Mr. George J. Cook, Clerk, Saxmundham.

AUGUST 22.—**Sowerby Bridge.**—JOINERS' WORK.—For the carpenters' and joiners' work required in constructing movable flooring and platform for adapting the Swimming Baths for use as a Public Hall. Mr. J. Eastwood, Surveyor, Council Offices, Sowerby Bridge.

AUGUST 23.—**London, E.1.**—RENOVATING AND REDECORATING.—Renovating and redecorating at the Schools, at Green-street, Upton Park, E.7, for the Guardians of the Parish of St. George in the East. Mr. R. M. Lochner, Clerk, Guardians' Offices, Raine-street, Old Gravel-lane, E.1, on receipt of stamped (postage 6½d.), addressed, large size envelope.

AUGUST 23.—**Manchester.**—PALM HOUSE.—For rebuilding palm house at Alexandra Park, for the T.C. City Architect, Town Hall, Manchester. Deposit £1 1s.

AUGUST 23.—**Swansea.**—HOUSES.—Erection of 14 houses on Llanerch Estate, for the T.C. Mr. E. E. Morgan, Borough Architect, 3, Prospect-place, Swansea.

AUGUST 23.—**Thakeham.**—REPAIRS.—For repairs to the roof at the Poor Law Institution at Thakeham. Mr. Percy Ayling, Clerk, Storrington, Pulborough.

AUGUST 23.—**Wrexham.**—BATHS.—For extension of the Public Baths, for the T.C. Mr. J. England, Borough Engineer, Wrexham. Deposit £2 2s.

AUGUST 23.—**Enniskillen.**—HOUSES.—Erection of 12 houses, for the U.D.C. Borough Surveyor.

AUGUST 24.—**Kirkcudbright.**—HOUSES.—Erection of four blocks of two houses. Mr. John Gibson, Town Clerk, Kirkcudbright. Deposit £1 1s.

AUGUST 24.—**Salford.**—EXTENSION.—For new lavatories and mess-room extension at the Mains Depot, Frederick-road. Borough Electrical Engineer, Electricity Works, Frederick-road, Salford.

*AUGUST 24.—**Woking, Surrey.**—NEW BAPTIST HALL AND INSTITUTE.—Erecting new Baptist Church Hall and Institute at Woking, Surrey. Messrs. C. S. Thomas and Herbert Jones, architects and surveyors, Salisbury Chambers, Winde-street, Swansea. Deposit £3 3s.

AUGUST 25.—**Abersychan.**—HOUSES.—For erecting 40 houses on Manor-road site, for Abersychan U.D.C. Also for construction of necessary roads and sewers in connection with houses (separate tenders). The Architects to the Council, Co-operative Wholesale Society, St. Mary-street, Cardiff.

AUGUST 25.—**Bridlington.**—HALL, &c.—Erection of gymnasium and assembly-hall at the Bridlington School. Mr. John Bilson, architect, 23, Parliament-street, Hull. Deposit £1.

AUGUST 25.—**Dewsbury.**—PAINTING.—For painting the outside woodwork of the Springfield Chapel and school buildings in Halifax-road. Mr. B. Micklethwaite, 42, Plevna-terrace, Savile Town, Dewsbury.

AUGUST 25.—**Ebbw Vale.**—HOUSE.—Erection of sexton's house at Ebbw Vale Cemetery, for the U.D.C. Mr. P. I. Davies, Surveyor, Ebbw Vale.

AUGUST 25.—**Edinburgh.**—HOUSES.—Erection of seven single and two double tenements, comprising in all 66 houses, at St. Clair-street, Easter-road, for the T.C. Messrs. Morham & Brotchie, 29, Hanover-street, Edinburgh.

AUGUST 25.—**Milnrow.**—WAR MEMORIAL.—For erecting a war memorial on a site in the Mill-yard, for the War Memorial Committee. Surveyor to the U.D. Council, Council Offices, Milnrow. Deposit £3 3s.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Brick-layers' Labourers.	Masons' Labourers.	Plasterers' Labourers.
Aberdeen	1/7	1/8	1/7	1/7	1/8	1/8½	1/6½	1/-		
Airdrie	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Alexandria	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2		
Arbroath	1/7	1/6	1/6	1/7	1/6	1/6	1/5	1/1		
Ayr	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Bathgate	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/1 to 1/3		
Blairgowrie	1/7	—	1/7	1/7	1/7	1/7	1/6½	—		
Bo'ness	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2		
Cambridge	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Dumbarton	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2		
Dumfries	1/5	1/5	1/5	1/5	1/5	1/6	1/5	1/1 to 1/3		
Dundee	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Dunfermline	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Edinburgh	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Falkirk	1/7	1/7	1/7	1/7	1/7	1/7	1/5½	1/2½		
Fort William	1/7	1/6	1/6	1/6	1/6	1/6	1/6½	1/1½		
Galashiels	1/5	1/5	1/5	1/5	1/5	1/5	1/5½	1/1		
Glasgow	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Greenock	1/7	1/7	1/7	1/7	1/7	1/7	1/5½	1/1 to 1/2½		
Hamilton	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Hawick	1/5	1/5	1/5	1/5	1/5	1/5	1/5½	1/1½		
Helensburgh	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Inverness	1/3½	—	1/3	1/4	1/4½	1/4	1/3½	10d. to 1/2		
Kilmarnock	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Kirkcaldy	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Kirkwall	1/7	1/5	1/3	1/4	1/4	1/4	1/4	1/-		
Lanark	1/7	1/7	1/7	1/7	1/7	1/7	1/5½	1/2½		
Leith	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Motherwell	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Perth	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Stirling	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Stirlingshire (Eastern District)	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		
Wishaw	1/7	1/7	1/7	1/7	1/7	1/7	1/6½	1/2½		

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 264.

August 25.—**Percy Main.**—Houses.—Construction of two dwelling houses at Low Row, Percy Main, for the Tyne Improvement Commissioners. Mr. Richard Aughton, General Manager, Tyne Improvement Commission Offices, Bewick-street, Newcastle-upon-Tyne. Deposit £2 2s.

August 25.—**Portrush.**—Hall.—Erection of Masonic hall. Mr. A. J. Clarke, architect, 11, Kerr-street, Portrush.

August 27.—**Greenock.**—Tenements.—Erection of 10 three-story tenements (four sites), consisting of two and three apartment houses, for the T.C. Office of Public Works, Municipal Buildings, Greenock. Deposit £1 1s.

August 28.—**Cape Town, South Africa.**—Medical School.—Erection of a new Medical School and other contingent works at Groote Schuur, near Cape Town, for the Council of the University of Cape Town. High Commissioner for the Union of South Africa, Trafalgra-square, London, W.C. Deposit £2.

August 28. — **Beaconsfield.** — Post Office. — Erection of a new Sub-Post Office at Beaconsfield. Contracts Branch, H.M. Office of Works, King Charles-street, S.W. 1. Deposit £1 1s.

August 28.—**Ealing.**—Alterations.—Alterations, additions, repairs, &c., to Ealing Telephone Exchange, for H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, S.W. 1. Deposit £1 1s.

August 28.—**Evenwood.**—Reroofing.—For the reroofing of the Congregational Sunday School, Evenwood. Mr. John Allinson, The Green, Evenwood.

August 28.—**Fitzwilliam.**—Houses.—Erection of 60 dwelling-houses, at Fitzwilliam, near Wakefield, for the South Kirkby, Featherstone, and Hemsworth Collieries, Ltd. Messrs. Garside and Pennington, architects, Ropergate, Pontefract. Deposit £2 2s.

August 28.—**Hammersmith.**—Rebuilding.—For rebuilding the frontage at Grove-road, Hammersmith, Sorting Office, for H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, S.W. 1. Deposit £1 1s.

August 28.—**Inverness.**—Houses.—Erection of two dwelling houses at Fort Augustus, and one block of two houses at Gorthleck, for the Inverness C.C. Mr. A. Grant, architect, 6, Queen's-gate, Inverness.

August 28.—**Leeds.**—Houses.—Erection in brick or concrete of 50 houses on the Crossgates Estate, and 50 houses on the Middleton Estate, for the T.C. Mr. W. T. Lancashire, City Engineer, Municipal Buildings, Leeds. Deposit £1 1s.

August 28.—**Newport (Mon).**—Houses.—Erection of six houses in Corporation-road. Borough Engineer, 8, Corn-street, Newport. Deposit £2 2s.

August 29. — **Blyth.** — Houses. — Erection of 50 houses, for the T.C. Borough Engineer, Municipal Buildings, Blyth.

August 29.—**London.**—Painting, Repairs, &c.—For cleaning painting, repairs, &c., at Fountain Temporary Mental Hospital, Tooting-grove, for the Metropolitan Asylums Board. Offices, Thames Embankment. Deposit £1.

✱August 29.—**London, S.W.17.**—Patent Glazing.—Patent glazing, &c., to covered ways at Tooting Bec Mental Hospital extension, Church-lane, S.W. 17., for the Metropolitan Asylums' Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1.

✱August 29.—**London, N.W. 3.**—Alterations.—Sundry alterations at the North Western Fever Hospital and Ambulance Station, Lawn-road, Hampstead, N.W. 3, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1.

August 31.—**Barking, Essex.**—Sheds.—Completing the erection of two open resting sheds, at their Faircross Elementary School, in their district. One shed is about 90 ft. × 30 ft. in two spans; the other about 55 ft. × 15 ft. in one span, each consisting of cast-iron columns and light fir-framed roofs covered with corrugated asbestone, for the Barking Town U.D.C. Mr. C. J. Dawson, Clock House Chambers, Barking.

✱August 31.—**Barking, Essex.**—Building.—Erection of a Centre for Domestic Instruction, about 43,000 cub. ft., at the site of the Westbury School in this district. Quantities, &c., on and after August 21, at the office of the Council's Architect, Mr. C. J. Dawson, F.R.I.B.A., Clock House Chambers, Barking. Deposit £2 2s.

August 31.—**Brynmawr.**—Houses.—For erecting, for U.D.C., 60 houses (22 parlour type, and 38 non-parlour type) at Twyncynghordy, Brynmawr. No sublet of contract or piece workmanship agreed to. Contracts may be for whole or not less than 10 houses. Mr. Henry Waters, M.S.A., Waungoch House, Beaufort. Deposit £2 2s.

✱August 31.—**Loughborough.**—New Offices and Fitters' Shop.—Clearing site and erection of new offices and fitters' shop for the Gas Department for the Gas Committee of the Borough of Loughborough. Messrs. G. H. & A. M. Barrowcliff, Town Hall Chambers, Loughborough. Deposit £2 2s.

August 31.—**Penybont (Glam).**—Twenty Houses.—For erecting, for the Penybont (Glam) R.D.C., 20 houses at 8am Housing Site. Mr. J. Simon Davies, F.S.I., 8, Wyndham-street, Bridgend. Deposit £2 2s.

August 31.—**Sutton-in-Ashfield.**—Baths.—Erection of public swimming baths, for the Sutton-in-Ashfield Miners' Welfare Committee. Mr. L. Dodsley, architect, Bainbridge Chambers, Brook-street, Sutton-in-Ashfield. Deposit £2 2s.

August 31.—**Tenby.**—Painting.—For painting of Carswell Farm buildings, &c., for trustees of Tenby Church and Charity Estates. Mr. J. A. Bancroft, St. Julien-street, Tenby.

September 1.—**Barnsley.**—Street Works and Houses.—Tenders are invited as follow: Private improvement works and the making up and completion of Henshall-street, Milnes-street, back road laying between Hawthorne-street, St. George's-road, and Longcar-lane, and back road between Kier-street and Summer-street, Barnsley. Painting exterior of the Public Baths, York-street and Race-street, Barnsley. External work at Locke Park, Town End Recreation Ground, and St. Mary's Disused Burial Ground. Erection of 82 non-parlour houses at the junction of Pontefract-road and Grange-lane, Barnsley; and for the drainage work in connection therewith. Borough Engineer, Fairfield House, Barnsley.

September 1.—**Brentford.**—Convenience.—Erection of a public urinal at the Recreation Ground, St. Paul's-road, for the U.D.C. Mr. W. J. W. Westlake, Clifden House, Brentford.

September 1.—**Royston, near Barnsley.**—Houses.—Tenders are invited for the erection of 12 houses, for the U.D.C.; also the roadmaking and laying of sewer. Messrs. Dyson, Cawthorne & Coles, 10, Regent-street, Barnsley.

September 3.—**Bristol.**—Convenience.—Erection of public convenience at Greville Smyth Park, for the T.C. Mr. L. S. McKenzie, City Engineer, Bristol. Deposit £2 2s.

September 3.—**Dartford.**—Houses.—Erection of 24 houses at Ship-lane, Sutton-at-Hone, for the R.D.C. Mr. Eustace J. Hobbs, Clerk, Council Offices, West Hill, Dartford. Deposit £2 2s.

September 3.—**Norwood, S.E.**—Extension.—For an extension of the playroom at The Children's Home, "Cumberlow," Goat House Bridge, Norwood, S.E., for the Guardians of the Poor of the Lewisham Union. Guardians'. Offices, 394, High-street, Lewisham, S.E. Deposit £1 1s.

September 3.—**Rochdale.**—School.—Erection of open-air school at Brownhill, for the T.C. Borough Surveyor, Town Hall, Rochdale.

✱September 4.—**Aberdare.**—Post Office and Telephone Exchange.—Erection of a new Post Office and Telephone Exchange at Aberdare, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s., payable to the Secretary.

September 4.—**Birmingham.**—Repairs, &c.—Execution of ordinary works and repairs at the Beacon and Lickey Hostels, Birmingham, for H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit 10s. 6d.

September 4.—**Cardiff.**—Painting.—(1) External painting, City Lodge, East; (2) external painting, City Lodge, West, for the B.G. Mr. R. Stephenson, Clerk, Union Offices, 11, Park-place, Cardiff.

September 4.—**Hampton, Middlesex.**—Houses.—Erection of 24 houses on the Priory-road site, Hampton, for the Urban District Council. Mr. Sidney H. Chambers, Surveyor to the Council, Public Offices, Hampton, Middlesex. Deposit £2 2s.

✱September 4.—**Various Places.**—Ordinary Works and Repairs.—Execution of ordinary works and repairs at the buildings in the charge of the Commissioners of H.M. Office of Works, at various places. Contracts Branch, H.M. Office of Works, King Charles-street, S.W. 1. Deposit 10s. 6d. in each case (payable to the Secretary).

September 5.—**Manchester.**—School.—Erection of Higher Ormond-street Municipal School. Education Offices, Deansgate, Manchester. Deposit £1 1s.

✱September 5.—**Twickenham.**—Houses.—Erection of 16 "A" type houses on the Prospect-crescent Site, Whitton, for the Twickenham U.D.C. Surveyor to the Council, Town Hall, Twickenham. Deposit £2 2s.

✱September 6.—**Surbiton, Surrey.**—Pump House.—Construction of a pump house, alterations to existing boiler house, boiler setting, &c., and other contingent works, at their Surbiton Pumping Station, in the county of Surrey, for the Metropolitan Water Board. Mr. Henry E. Stilgoe, Chief Engineer, Offices of the Board, New River Head, 173, Rosebery-avenue, E.C. 1. Deposit £5, to Accountant to the Board.

September 10.—**Glasgow.**—Sanatorium.—Erection of the Mearnskirk Sanatorium, Mearns, Renfrewshire. Office of Public Works, 64, Cochrane-street, Glasgow. Deposit £10 10s.

September 12.—**Woolwich, S.E.18.**—Painting, &c.—Painting works, &c., to the premises Furze Lodge, Plum-lane, Plumstead, for the Guardians of the Woolwich Union. Messrs. Whincop & Channer, architects, 42, William-street, Woolwich.

✱September 17.—**Laleham, Middlesex.**—Engine House, &c.—Construction of the superstructure for an engine house, boiler house, elevated coal bunkers, chimney shaft, fitters' shop, stores, ash hoist building, sewage disposal plant, and other contingent works, at the Littleton Reservoir, in the Parish of Laleham, in the county of Middlesex, for the Metropolitan Water Board. Mr. Henry E. Stilgoe, Chief Engineer, Offices of the Board, New River Head, 173, Rosebery-avenue, E.C. 1. Deposit £10, to Accountant to the Board.

No Date.—**Buckhaven.**—Houses.—Erection of 60 two-roomed houses, with bathroom, scullories, &c., at Buckhaven, and 40 houses of a similar type at Methil, for the T.C. Mr. T. L. Brown, Burgh Engineer, Buckhaven. Deposit £1 1s.

No Date.—**Dumbarton.**—Painting.—For painting work for nine blocks of houses at Old Kilpatrick, for the C.C. Mr. J. Weekes, Architect, 24, George-square, Glasgow. Deposit £1 1s.

✱No Date.—**Dunmow, Essex.**—Demolition and Removal.—Offers are invited for the demolition and removal of an old timber, plaster and thatched cottage near Dunmow. Oak timbers and floor boards. Mr. Jno. Stuart, F.R.I.B.A., County Architect, Springfield, Old Court, Chelmsford.

No Date.—**Killin.**—Hall.—Erection of new Village Hall, Killin. Messrs. Colcutt & Hamp, architects, 20, Red Lion-square, W.C. Deposit 10s.

No Date.—**Llandough (near Penarth).**—Erection of Memorial Hall.—For erecting for the Executive Committee the Llandough and Leckwith Memoria. Institute. Mr. J. T. Dewar, 30, Grove-terracle Penarth.

No Date.—**Pontypool.**—Offices.—Erection of new Guardians' Offices, in Hanbury-road. Mr. C. J. F. Wilton, architect, Pontypool. Deposit £1 1s.

No Date.—**Pontypridd.**—Drivage.—For driving a number of headings in hard ground and some in coal, for the Great Western Colliery Co., Ltd. The General Offices of the Company, Great Western Colliery, Pontypridd.

No Date.—**Thornhill.**—House.—Erection of a dwelling house in Thornhill. Mr. A. Barker, The Cross, Thornhill.

No Date.—**Uig.**—Doctors' Houses.—For all trades in connection with the erection of (1) doctor's house, Carloway, (2) doctor's house, Miavaig. Mr. Wm. Macrae, Inspector of Poor, Miavaig, Stornoway.

FURNITURE, MATERIALS, etc.

August 20.—**Chorley.**—Granite Setts.—Supply of 2,000 tons of 4 in. by 5 in. granite setts to T.C. Town Clerk, Chorley.

August 20.—**Wakefield.**—Materials, &c.—Supply of road materials, tools and implements, to the Highways Committee of the West Riding C.C. West Riding Surveyor, County Hall, Wakefield.

August 21.—**Poole.**—Materials.—Supply of broken granite or limestone to the T.C. Mr. S. J. Newman, Borough Surveyor, Poole.

August 22.—**Belfast.**—Materials.—Supply to the Belfast and County Down Railway Co. of stores for twelve months. Storekeeper, Belfast Terminus.

August 24.—**Dundee.**—Wood Blocks.—Supply to the T.C. of 210,000 creosoted deal paving blocks. Mr. G. Baxter, City Engineer, Dundee.

August 24.—**London.**—Materials.—Supply to the Bombay, Baroda and Central India Railway Co. of picks, phowrahs, and shovels. Mr. S. G. S. Young, Secretary, 91, Petty France, S.W. 1. Charge 10s.

August 24.—**Woodford.**—Materials.—Supply of road materials, &c., to the U.D.C. Mr. W. Farrington, Surveyor, Council Offices, Woodford Green.

August 25.—**Beddington.**—Materials.—For supply of road materials, tools, &c., to the U.D.C. Mr. S. F. R. Carter, Surveyor, Wallington.

August 25.—**Esrick.**—Materials.—Supply of slag and tar to the R.D.C. Mr. J. R. Hudson, surveyor, 4, Heslington-road, York.

August 27.—**Bermondsey.**—Materials.—Supply of various materials to the B.C. Mr. Fredk. Ryall, Town Clerk, Town Hall, Spa-road, S.E.

August 27.—**Chatham.**—Kerb.—Supply of granite kerb and setts to the T.C. Mr. R. L. Honey, Borough Engineer, Town Hall, Chatham.

August 27.—**Johannesburg.**—Paint.—Supply of 200 gallons of aluminium paint to the T.C. Department of Overseas Trade, 35, Old Queen-street, S.W.

August 27.—**Leeds.**—Granite Setts.—Supply of granite setts to the West Riding C.C. West Riding Surveyor, County Hall, Wakefield.

September 18.—**Merthyr Tydfil.**—Supplies.—For supply in bulk for period of six months from October 1 next, for the Poor Law Institutions at Merthyr and Trecynon and the Cottage Homes, Aberdare, for the Merthyr Tydfil Board of Guardians, of the following supplies:—Building materials, haulage, straw, electrical fittings, earthenware, oils, paints, glass, ironmongery, shoemaking materials, leather, boots, &c., drugs. The Clerk to the Guardians, Union Offices, High-street, Merthyr Tydfil.

ENGINEERING, IRON AND STEEL.

August 17.—**Walsall.**—Weighing Machine.—Providing and fixing of a weighing machine (8 to 10 tons) at their Institution, of the B.G. Mr. A. H. Lewis, Clerk, 29, Leicester-street, Walsall.

August 18.—**Chorley.**—Electric Lighting.—Supply and fixing of the necessary wiring and fittings required in connection with the lighting by electricity of a portion of the interior of the Town Hall. Borough Surveyor, Chorley.

August 18.—**Selby.**—Electric Lighting.—For the installation of electric lighting in the Selby Wesleyan Chapel. Mr. W. T. Blackburn, Brayton-road, Selby.

August 21.—**London.**—Electrical Installation.—For electric wiring installation at Somerset House, for H.M. Commissioners of Works. Contracts Branch, King Charles-street, S.W. Deposit £1 1s.

August 21.—**Manchester.**—Steelwork.—For constructional steelwork required for the provision and erection of a new sub-station in Gorton. Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester. Deposit £1 1s.

August 23.—**Salford.**—Bridge.—For construction of footbridge over L.M. & S. Railway, near Hodge-lane, for the T.C. Borough Engineer, Salford. Deposit £2 2s.

August 24.—**London.**—Heating Installation.—Installation of heating apparatus, &c., at the New Science Museum, London. Contracts Branch, H.M. Office of Works, King Charles-street, S.W. 1. Deposit £1 1s.

—AUGUST 24.—**Manchester.**—STACKS.—Supply and erection of steel newspaper stacks at temporary Reference Library, Piccadilly, for the T.C. City Architect, Town Hall, Manchester. Deposit £1 1s.

AUGUST 25.—**Wigan.**—GAS PLANT.—For supply of carbonizing plant at Gasworks, for the T.C. Mr. F. Bentley, Gasworks, Wigan. Deposit £4.

AUGUST 25.—**Hamilton.**—GAS HOLDER.—Erection of a spiral guided gasholder and steel tank of approximate capacity of 1¼ million cubic ft., for the T.C. Mr. David Robb, Engineer, Hamilton Gas Works.

AUGUST 28.—**Oulton and Wakefield.**—BRIDGES.—(1) Croft Bridge, Oulton: Partial reconstruction of arch (12 ft. span) in reinforced concrete, and other repair works; (2) Woolley North Bridge, Wakefield: Partial repairs, in stone, to east elevation, and rebuilding of parapet walls. West Riding Surveyor, County Hall, Wakefield. Deposit £1 each contract.

AUGUST 29.—**London.**—WEIGHBRIDGES.—For providing and fixing a new 20-ton weighbridge at each of the following institutions: Northern Fever Hospital, Winchmore Hill; Queen Mary's Hospital, Carshalton; Darenth Training Colony, Dartford; Tooting Bec Mental Hospital Extension, Tooting, S.W., for the Metropolitan Asylums Board. Office of the Board, Victoria-embankment, E.C. 4. Deposit, £1.

AUGUST 31.—**Chile.**—HARBOUR WORKS.—**Extension of the mole of the Port of Valparaiso and complementary harbour works, depots, &c., for the Navy. Chilean Legation in London.**

AUGUST 31.—**Sheffield.**—BRIDGE.—Designs and tenders for reinforced concrete bridge over River Don at Leppings-lane, for the T.C. Surveyor, Town Hall, Sheffield. Deposit £5.

AUGUST 31.—**Tottenham, N. 15.**—REFUSE DESTRUCTOR.—Dismantling certain cells, boilers, economiser, &c., and the substitution of a modern refuse destructor plant at the Refuse Destructor Works, Down-lane, Tottenham, N., for the Tottenham District Council. Engineer of the Council, Town Hall, Tottenham, N. 15. Deposit £1 1s.

SEPTEMBER 3.—**Dublin.**—STEELWORK.—Supply of steelwork for bridge for the Midland Great Western Railway of Ireland Co. Chief Engineer, Broadstone Terminus, Dublin. Charge 4s.

SEPTEMBER 3.—**Dundee.**—BRIDGE.—Erection of plate girder railway bridge over Kingsway, for the T.C. Mr. G. Baxter, City Engineer, Dundee. Deposit £5.

SEPTEMBER 14.—**Nottingham.**—PIPING, &C.—Manufacture and erection of steam water and other pipework, valves, tanks, &c., at the Power Station, for the T.C. Messrs. Preece, Cardew & Rider, 8, Queen Anne's Gate, Westminster, S.W.1. Deposit £5.

SEPTEMBER 15.—**Manchester.**—PUMPS.—For one set of electrically driven high-pressure centrifugal pumps, to deliver 1,000 g.p.m. against a pressure of 1,120 lb. per square inch. Secretary, Waterworks Offices, Town Hall, Manchester. Deposit £2 2s.

SEPTEMBER 17.—**London.**—MACHINE TOOLS.—Supply of machine tools, for the Council's Tramway Central Repair Depot, Charlton. General Manager, London County Council Tramways, Victoria-embankment, W.C. 2. Deposit £2.

SEPTEMBER 19.—**Fulham.**—FILTRATION PLANT.—Supply and erection of filters and plant at the Fulham Public Baths. Superintendent and Engineer at the Baths, Walham Green, S.W.6.

SEPTEMBER 27.—**Chile.**—PORT IMPROVEMENT.—Improvement of the Harbour of Constitucion, for the Chilean Government. Chilean Legation, 22, Grosvenor square, W. 1.

NOVEMBER 1.—**Siam.**—BRIDGES.—Supply of superstructures of steel railway bridges to Siam State Railways. Messrs. C. P. Sandberg, 40, Grosvenor-gardens, S.W. 1. Charge 28s.

NOVEMBER 30.—**Sydney.**—BRIDGE.—Construction of the superstructure and substructure of a cantilever bridge across Sydney Harbour; also an alternative tender for the construction of the superstructure and substructure of an arch bridge across Sydney Harbour. Agent-General for New South Wales, Australia House Strand, W.C.

NO DATE.—**Conningsby.**—EQUIPMENT.—Complete equipment of the Lincolnshire Co-operative Bacon Factory, Ltd., with plant, machinery, electric lighting installation, and all accessories. Mr. B. E. Brighton, Lincolnshire Co-operative Bacon Factory, Ltd., Conningsby, Lincolnshire. Deposit £5 5s.

NO DATE.—**Dewsbury.**—ELECTRIC LIGHTING.—Wiring, &c., of The Hollins, Dewsbury Moor, for electric light. Secretary, Moor End W.M. Club, Dewsbury Moor.

ROAD, SANITARY, AND WATER WORKS.

AUGUST 18.—**Durham.**—ROADS.—Construction of roads and sewers in connection with housing scheme at Ludworth, for the R.D.C. Mr. Geo. Gregson, surveyor, 38, Sadler-street, Durham. Deposit £2.

AUGUST 18.—**Hale.**—SEWERS.—For sewering in Hale-road, for the U.D.C. Mr. T. Blagburn, Surveyor, Council Offices, Hale.

AUGUST 20.—**Glasgow.**—ROADS.—Construction of about 3,000 lin. yds. of main road, including the laying of tramways thereon, forming a diversion of the Renfrew-road, between Maxwell-road, Shieldhall, and Millburn Bridge, Renfrew, with three reinforced concrete bridges, carrying the new road over existing and intended lines of railway, for the Clyde Navigation. Engineer, 16, Robertson-street, Glasgow. Deposit £5 5s.

AUGUST 20.—**Kirkintilloch.**—WATER WORKS.—Providing and jointing 1,170 lineal yds. of 12 in. diameter cast-iron water pipes from Antermony Loch to Antermony Reservoir for the T.C. Messrs. W. R. Copland & Sons, Civil Engineers, 146, West Regent-street, Glasgow. Deposit £1 1s.

AUGUST 20.—**Lanark.**—ROADS, &C.—Construction of roads and sewers at Garnkirk Housing Site, for the C.C. Mr. Jas. A. M'Callum, District Clerk, 15, West George-street, Glasgow. Deposit £1 1s.

AUGUST 20.—**Urmston.**—ROADS.—Laying about 1,200 sq. yds. of concrete flagging in Church-road, for the U.D.C. Mr. J. Heath, Surveyor, Council Offices, Urmston.

AUGUST 20.—**Scunthorpe.**—BOREHOLE.—Sinking borehole, for the U.D.C. Mr. W. Farrar, Surveyor, Council Offices, Scunthorpe.

AUGUST 21.—**Ayrshire.**—SEWERS, &C.—Construction of main sewers in streets, outfall sewer, manways, septic tank, and percolating filter, &c. Mr. J. Montgomerie Pearson civil engineer, 51, John Finnie-street, Kilmarnock. Deposit £2 2s.

AUGUST 21.—**Baildon.**—ROADS.—For making-up part of Bank Crest, for the U.D.C. Surveyor, Council Offices, Baildon. Deposit £2 2s.

AUGUST 22.—**Barnstaple.**—ROADS.—Supply of hired steam rollers to the Devon C.C. Mr. R. M. Stone, County Surveyor, Northern Division, Barnstaple.

AUGUST 22.—**Leadgate.**—ROADS.—Strengthening and resurfacing of 1,150 yds. of Class I road, at East Castle, for the U.D.C. Mr. Albert Johnson, Surveyor, Council Office, Leadgate.

AUGUST 22.—**Limerick.**—PAVING.—For paving about 36,166 sq. yds. of roadways with reinforced concrete 7 in. thick, 5,102 sq. yds. with re-dressed granite setts, and 4,974 sq. yds. with new granite setts, for the T.C. Mr. J. J. Peacocke, City Surveyor, Town Hall, Limerick. Deposit £2.

AUGUST 22.—**Stainland.**—SEWER.—Provision and laying of about 170 lin. yds. of 9 in. pipe sewer, for the U.D.C. Mr. H. Edgar Moses, Surveyor, Council Offices, Stainland.

AUGUST 25.—**Isle of Thanet.**—SEWER.—For laying sewer for the R.D.C. at Westgate-on-Sea. Surveyor, Offices, Birchington.

AUGUST 25.—**Middlewich.**—WATER WORKS.—(1) New borehole; (2) extension of pumping station buildings; (3) new pumping plant, for the U.D.C. Mr. F. W. Stocks, Engineer, Town Hall, Middlewich. Deposit £2 2s.

AUGUST 25.—**Newbury.**—ROADS.—For re-surfacing of Andover-road, for the T.C. Borough Engineer, Municipal Buildings, Newbury.

AUGUST 25.—**Southgate.**—SEWER.—Construction of surface water sewer and foul sewer, for the U.D.C. Mr. R. Phillips, Surveyor, Town Hall, Palmers Green, N.

AUGUST 27.—**Bishop Auckland.**—SEWER.—Construction of about 2,000 yards of 12 in. and 9 in. stoneware pipe sewer. Messrs. Willcox & Raikes, Union Chambers, 63, Temple-row, Birmingham. Deposit £5 5s.

AUGUST 28.—**Bradford.**—SANITARY.—For clearing of middens, &c., in Tong Village and North Bierley and Idle districts, for one year. Mr. Call, Superintendent, Hammerton-street Depot, Bradford.

AUGUST 28.—**Glasgow.**—ROADS.—Construction of roads and sewers at Cathcart-road, for the T.C. Mr. J. Lindsay, Town Clerk, Glasgow.

AUGUST 28.—**London.**—ROADS.—For the formation of roads and paths at the Camberwell Housing Scheme, Sunray-avenue, Denmark-hill, S.E., for H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit, £1 1s.

AUGUST 28.—**Thorne.**—SEWERS.—Construction of 2,583 lin. yds. of pipe sewers, from 9 in. diameter to 18 in. diameter, in parish of Stainforth, for the R.D.C. Mr. E. J. Silcock, 10, Park-row, Leeds. Deposit £5.

✱AUGUST 29.—**London, S.W. 17.**—TAR PAVING.—Providing and laying tar paving to paths, &c., at Tooting Bec Mental Hospital extensions, Church-lane, S.W. 17, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1.

AUGUST 31.—**York.**—ROADS.—For making up seven streets, for the T.C. Mr. F. W. Spurr, City Engineer, Guildhall, York. Deposit £1 1s.

SEPTEMBER 1.—**Chapel-en-le-Frith.**—SEWAGE WORKS.—For construction of sewage disposal works at Bamford, for the R.D.C. Messrs. Brady & Partington, Engineers, Town Hall, Chapel-en-le-Frith. Deposit £5.

SEPTEMBER 1.—**Langton Matravers.**—ROADS.—Widening and resurfacing of the "Valley-road," Langton Matravers, about 3½ miles in length, for the Dorset C.C. Mr. W. T. Fletcher, County Surveyor, County Offices, Dorchester. Deposit £2 2s.

SEPTEMBER 1.—**West Riding of Yorkshire.**—ROADS.—For various road works in the districts of Saddleworth, Stanley, Birstall, Castleford, and Pontefract, for the C.C. West Riding Surveyor, County Hall, Wakefield. Deposit £1.

SEPTEMBER 3.—**Hammersmith.**—MATERIALS, &C.—Supply of stores and materials to the B.C. for six months. Borough Engineer, Town Hall, Hammersmith, W.

SEPTEMBER 3.—**Mitcham.**—ROADS.—For the making-up of Lewis-road, for the U.D.C. Surveyor's Office, Broadway House, London-road, Lower Mitcham.

SEPTEMBER 3.—**Stirling.**—ROADS.—Re-surfacing of the roadway from Larbert Cross to Carron Iron Works with clinker or slag asphaltic macadam, for the C.C. Mr. Alexander Lindsay, Joint Road Surveyor, District Office, Falkirk.

SEPTEMBER 3.—**Uckfield.**—SEWAGE WORKS.—Construction of sewerage and sewage disposal works at Waldron, for the R.D.C. Mr. J. Taylor, Henley House, Uckfield. Deposit £3 3s.

SEPTEMBER 7.—**Barnsley.**—ROADS.—For private improvement works at Henshall-street, Milnes-street, and two back roads, for the T.C. Borough Engineer, Barnsley.

Competitions.

(*See Competition News, page 240.*)

Auction Sales, Tenders, etc.

AUGUST 21.—**London, S.W.**—Messrs. Veryard & Yates will sell, without reserve, at 255, Clapham-road, S.W. (close to "Swan," Stockwell), timber, fittings and building materials arising from demolition of a commodious residence. Auctioneers, 365, Norwood-road, S.E.27.

AUGUST 21, 22 AND 23.—**Eltham.**—Mr. F. H. Clark will sell, without reserve, timbers and materials contained in the Women's Hostels, Well Hall-road. Auctioneer, Railway Wharf, York-road, Wandsworth.

AUGUST 23.—**London, E.C.**—Messrs. B. Norman & Son will sell re Chinns, Ltd., in liquidation, by order of the liquidator, removed from 7, Waithman-street, Ludgate-hill, for convenience of sale. Valuable London stock of brasswork, &c., plate-glass showcases, mirrors, office furniture. Auctioneers' Sales Rooms, 5, Little Britain (close to G.P.O.).

✱AUGUST 23.—**London, W.C.1.**—Messrs. Henry Butcher & Co. will sell, at the Auction Rooms, 13, High Holborn, W.C.1, an assortment of new and partly used tools and stores, comprising 1,250 stonebreakers, and boiler-makers' hammers, 400 assorted 10-lb. sledge hammers, &c. Auctioneers, 63 and 64, Chancery lane, London, W.C.2.

SEPTEMBER 4, 5, AND 6.—**Sussex.**—Mr. F. H. Clark will sell, without reserve, the whole of the huts and building material contained in South Camp, Seaford, Sussex. Auctioneer, Railway Wharf, York-road, Wandsworth.

Public Appointments.

AUGUST 20.—**Lambeth, S.W.2.**—Junior Engineering Assistant required in the Borough Engineer's Department by the Metropolitan Borough of Lambeth Council. Mr. Bruce Penny, Town Clerk, Lambeth Town Hall, Brixton Hill, S.W. 2.

AUGUST 20.—**Stoke-on-Trent.**—Competent Temporary General Architectural Assistant required by the County Borough of Stoke-on-Trent. Mr. A. Burton, Borough Surveyor, Town Hall, Stoke-on-Trent.

AUGUST 20.—**East Ham, E.6.**—Clerk of Works required to supervise the erection of extension to the Town Hall and Public Offices by the Town Council of the County Borough of East Ham. The Borough Engineer, Town Hall, East Ham, E.6.

✱AUGUST 28.—**Dorset.**—TEMPORARY ARCHITECTURAL ASSISTANT.—Temporary architectural assistant for general county work by the Dorset C.C. County Architect's Department. Mr. E. A. Ffooks, Clerk to the County Council, County Offices, Dorchester.

SEPTEMBER 3.—**Middlesex.**—Architect or Building Surveyor required by the Justices of the Gore Division of Middlesex to examine the plans of alterations, &c., proposed in licensed premises, and to advise them thereon. The Clerk to the Justices, Edgware, by enclosing a stamped addressed envelope.

PATENTS.*

APPLICATIONS PUBLISHED.*

198,899.—W. G. Chambers: Windows.

198,924.—G. A. Edman: Fireplace frames.

198,928.—W. Bell: Removable and adjustable frieze or moulding for spanning passages and recesses.

198,930.—F. W. Mellowes, H. Hall and G. Gibson: Glazing.

187,936.—L. Ottinger: Latches.

198,036.—G. Jones and G. F. Davis: Fasteners for windows and doors.

198,074.—E. S. Shoults: Knock-down or portable shelves.

198,082.—A. Ramsay and H. B. Perry: Fowl-houses and the like.

198,084.—A. M. Tucker: Weight-indicating devices, more particularly for use with well-drilling apparatus.

176,794.—P. O. Abbe, Inc.: Manufacture of paints.

198,108.—J. M. Tourtel and L. Johnston: Master-keyed locks.

198,129.—J. T. Haslam: Concrete mixers.

198,130.—D. Forsyth and W. Cook & Sons (Glasgow), Ltd.: Circular saws.

198,152.—A. Mackinnon: Windows.

198,154.—C. Harrison and W. Harrison: Method of and apparatus for the cutting, shaping and moulding of stone.

198,161.—B. Heffer: Concrete pipe-making machines.

198,162.—J. Legge and W. H. Legge: Locks and latches.

198,176.—E. E. Hall: Suspended ceilings.

198,181.—E. J. B. Standerwick and H. Stevenson & Sons, Ltd.: Boxes.

* All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 2 0
Second Hard Stocks	3 17 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 13 3	Best Blue Pressed Staffs.	9 11 6
Do. grooved for plaster	2 15 3	Do. Bullnose	10 1 6
Do. Bullnose	3 8 3	Blue Wire Cuts	7 11 6
Best Stourbridge Fire brick:—			
2½ in.	11 3 0	3 in.	13 2 0

Glazed Bricks—

Best White Ivory, and Salt Glazed Stretchers	22 0 0	D'ble Str'tch'rs	30 10 0
		D'ble Headers	27 10 0
Headers	21 10 0	One Side and two Ends	31 10 0
Quoins. Bullnose and 4½ in. Flats	28 10 0	Two Sides and one End	32 10 0
		Splays and Squints	30 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	2 1	3 in. per yd. super	2 9
2½ in. „	2 5	4 in. „	3 7

	s. d.		
Thames Ballast	10 6	per yard.	
Pit Sand	14 9	„ „	
Thames Sand	15 6	„ „	delivered 2 miles radius Paddington.
Best Washed Sand	15 6	„ „	
½ in. Shingle for Ferro-Concrete	14 0	„ „	
¼ in. „	15 0	„ „	
½ in. Broken Brick „	10 6	„ „	
Pan Breeze	5 6	„ „	

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification Test £2 18 0 to £3 3 6

51/- alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement	4 8 0
Roman Cement	8 15 0
Parian Cement	5 13 0
Keene's Cement, White	5 8 0
„ „ Pink	5 3 0
Plaster, Coarse, Pink	3 0 0
„ „ White	3 12 6
„ Fine	5 12 0
Strapite, Coarse	3 9 6
„ Finish	3 17 6
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	2 13 6
Hair	17 0 0
Granite Chippings	1 12 0

Note.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months, carr. pd.

Stourbridge Fireclay in s'eks 35s. 0d. per ton at rly. dpt.

STONE.

	s. d.
Bath Stone—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	2 11½
Portland Stone—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4
Do. do. delivered on road wagons at above stations, per ft. cube	4 5
White basebed, 3d. per ft. cube extra.	
Note.—½d. ft. cube extra for every foot over 20 ft. *average*, and ¼d. beyond 30 ft.	
Hopton-Wood Stone.	
Delivered at any Goods Station, London.	
Small random blocks, up to 10 ft. cube, Per ft. cube	7/-
Random blocks from 10 ft. and over „	17/-
Sawn two sides „	27/-
Sawn three or four sides „	32/-
York Stone, Blue—*Robin Hood Quality.*	
Delivered at any Goods Station London.	s. d.
6 in. sawn two sides landings to sizes (under 30 ft. super.) Per Ft. Super	5 3
6 in. rubbed two sides, ditto „	5 9
3 in. sawn two sides slabs (random sizes) „	2 1½
2 in. to 2½ in. sawn one side slabs (random sizes) „	1 5½
1½ in. to 2 in. ditto, ditto „	1 3
Hard York—	
Delivered at any Goods Station London.	
Scappled random blocks Per Ft. Cube	5 6
6 in. sawn two sides landing to sizes (under 40 ft. super.) Per Ft. Super	5 4½
6 in. rubbed two sides ditto „	6 0½
4 in. sawn two sides slabs (random sizes) „	2 10
3 in. ditto. ditto „	2 5
2 in. self-faced random flags. Per Yard Super	7 11

ARTIFICIAL STONE.

Delivered in London Area in full van loads.	s. d.
Plain per ft. cube	6 6
Moulded „ „	7 9
Cills „ „	8 3

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£34 0	3 × 6	£25 0
4 × 9	34 0	3 × 11	34 0
4 × 8	28 0	2 × 11	24 0
4 × 7	28 0	3 × 9	32 0
3 × 8	26 0	2½ × 9	32 0
3 × 7	25 0	3 × 4½	24 0
2½ × 7	24 10	3 × 4	24 0

WOOD (*Continued*).

PLANED BOARDS.

1 × 11	£38 10
1 × 9	£36 0

PLAIN EDGE FLOORING.

Inches,	per sq.	Inches.	per sq.
⅝	20/-	1¼	33/6
¾	23/-	1½	38/6
1	25/6		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	25/6
1¼	33/6
1½	38/6

MATCHINGS (BEST).

Inches	per sq.
⅝	17/6
¾	22/-
⅞	26/-

BATTENS

Inches	s. d.
⅝ × 2	2 4 per 100 ft.

SAWN LATHS.

Per bundle				0	2 10
Dry Wainscot Oak, per ft. super, as inch	0	2	0 to	0	2 6
½ in. do. do.	0	1	6 to	0	2 0
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0	1	9 to	0	2 6
Cuba Mahogany	0	3	6 to	0	4 0
Teak (Rangoon, Moulmein or Java), per load	45	0	0 to	50	0 0
American Whitewood planks, per ft. cube	0	14	0 to	0	16 0
Best Scotch Glue, per cwt.	4	10	0 to	—	
Liquid Glue, per cwt.	4	7	0 to	5	10 0

SLATES.

1st quality slates from Bangor or Portmadoc in truck loads delivered London area. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 7 6
Ditto hand made ditto	5 12 6
Ornamental ditto	5 17 6
Hip and valley tiles (per dozen) Hand made	0 9 6
Machine made	0 9 0

METALS.

Joists, Girders, &c., to London Station per ton—	£ s. d.
R. S. Joists, cut and fitted	13 10 0
Plain Compound Girders	15 10 0
„ Stanchions	17 10 0
In Roof Work	20 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
⅜ in.	16 10 0	⅝ in. to ¾ in.	13 10 0
½ in.	14 10 0	⅞ in. to 2½ in.	13 0 0

Wrought-Iron Tubes and Fittings—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Gas	52½%	52½%	62½%
Water	47½%	47½%	57½%
Steam	42½%	42½%	52½%
Galv'd—			
Gas	37½%	42½%	52½%
Water	31½%	37½%	47½%
Steam	25 %	32½%	42½%

C.I. Half-Round Gutters—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/1½	11d.	3½d.
3½ in.	1/2½	1/0½	3½d.
4 in.	1/4	1/1½	3½d.
4½ in.	1/5½	1/4	4d.
5 in.	1/7½	1/5½	5d.

O.G. Gutters.

3 in.	1/6½	1/2½	3½d.
3½ in.	1/6½	1/2½	3½d.
4 in.	1/7½	1/4	3½d.
4½ in.	1/9½	1/6½	4d.
5 in.	2/1½	1/9	5d.

Rain-Water Pipes, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/7½	1/1½	1/8
2½ in. „	1/9½	1/4	2/0½
3 in. „	2/1½	1/8	2/5½
3½ in. „	2/6½	1/11½	2/10½
4 in. „	2/11½	2/4½	3/5½

L.C.C. Coated Soil Pipes—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts plain	3 0½	2 2½	2 8
2½ in. „	3 6½	2 5½	3 3½
3 in. „	4 2½	2 8	4 0½
3½ in. „	4 7	3 3½	4 8½
4 in. „	5 1	3 9½	5 5

L.C.C. Coated Drain Pipes—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 9	5 8	8 10
4 in. „ „	6 3	6 8	11 4
5 in. „ „	7 6	11 6	18 2
6 in. „ „	8 10	14 4	23 5

Per ton in London.

Iron—	£ s. d.		£ s. d.
Common Bars	14 0 0	to	15 0 0
Staffordshire Crown Bars—good merchant quality	14 10 0	..	15 10 0
Staffordshire "Marked Bars"	17 0 0	..	18 0 0
Mild Steel Bars	13 10 0	..	14 10 0

METALS (*Continued*).

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, basis price	13 10 0	..	14 10 0
Hoop iron, basis price	16 10 0	..	17 10 0
„ Galvanised	31 0 0	..	32 0 0
Soft Steel Sheets, Black— Ordinary sizes to 20 g.	15 10 0	..	16 10 0
„ „ „ 24 g.	16 10 0	..	17 10 0
„ „ „ 26 g.	18 10 0	..	19 10 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	22 10 0	..	23 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	24 10 0	..	26 10 0
Flat and Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 9 ft. to 20 g.	£1 0 0	..	22 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	23 10 0	..	24 10 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker	23 10 0	..	24 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 10 0	..	26 10 0
Best Soft Steel Sheets, 26 g.	26 0 0	..	27 0 0
Cut Nails, 3in. to 6 in.	21 10 0	..	23 0 0
(under 3in. usual trade extras.)			

Metal Windows—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1/4 to 1/7 per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.		
Lead—Sheet, English, 4 lb. and up	34 0 0	..	—
Pipe in coils	34 10 0	..	—
Soil Pipe	37 0 0	..	—
Compo pipe	38 0 0	..	—

Note—Country delivery, 30s. per ton extra; lots under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	21 10 0	..	—
Do., ex country, carriage forward per ton	22 10 0	..	—

PLUMBERS' BRASS WORK.

Delivered in London.

New River Pattern Screw Down Bib Cocks for Iron.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

New River Pattern Screw Down Stop Cocks and Unions.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

New River Pattern Screw Down Main Ferrules.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz

Caps and Screws.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

Double Nut Boiler Screws.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2in.
7/6	11/6	17/-	29/-	36/-	63/- per doz.

Brass Sleeves.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

New River Pattern Croydon Ball Valves. S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

Drawn Lead P. & S. Traps with Brass Cleaning Screw.

	1½ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	120 „

Copper—	£ s. d.		
Strong Sheet per lb.	0 2 3	..	—
Thin „ „	0 2 4	..	—
Copper nails „	0 2 3	..	—
Copper wire „	0 2 4	..	—
Tin—English Ingots „	0 2 0	..	—
Solder—Plumbers' „	0 0 11	..	—
Tinmen's „	0 1 1	..	—
Blowpipe „	0 1 3	..	—

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 6
„ „ „ in barrels „	0 3 8
„ „ „ in drums „	0 3 11
Boiled „ „ in barrels „	0 4 0
„ „ „ in drums „	0 4 2
Turpentine in barrels „	0 6 6
„ in drums (10 gall.) „	0 6 9
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	55 10 0
Genuine White Lead Paint— "Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered	77 0 0
Red Lead, Dry (packages extra) per ton	42 0 0
Best Linseed Oil Putty per cwt.	0 16 0
Filoco per cwt.	0 15 6
Size. XD Quality fkn.	0 3 6

[*Concluded on next page.*]

* The information given on this page has been specially compiled for The Builder and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft
15 oz. fourths	3½d.	32 oz. fourths.....	8½d
15 „ thirds	4½d.	32 „ thirds.....	10½d.
21 „ fourths	5d.	Obscured Sheet, 15oz.	6d.
21 „ thirds	6½d.	21 „	5½d.
26 „ fourths	6d.	Fluted 15oz. 6½d. 21oz.	9½d.
26 „ thirds.....	7½d.	En'lled 15 „ 5½d., 21 „	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES. Per Ft.

⅛ Rolled plate	4½d.
3/16 Rough rolled	5½d.
¼ Rough rolled	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per gallon. £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Copal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	16	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	6
Fine Copal flatting	ditto	1	0	6
Hard drying Oak	ditto	0	18	0
Fine Hard drying Oak	ditto	0	19	0
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	2	0
Best ditto	ditto	1	12	0
Best Japan Gold Size		0	12	0
Best Black Japan		0	12	0
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	9	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	6
Liquid Dryers in Terebine		0	9	0
Cuirass Black Enamel		0	7	0

HEAVY TRAFFIC AND VIBRATION.

Writing with reference to a paragraph in our issue of July 27, the Thames Paper Co., Ltd., of Purfleet, Essex, state:

"There is constantly accumulating evidence that the ordinary plaster ceiling will not withstand the disintegrating effects of vibration inseparable from the modern conditions. Basing one's assumption on the number of cases of falling ceilings which are reported in the columns of the Press, it seems obvious that the fall of plaster ceilings is a frequent occurrence, and in many cases more or less serious injury results. The trouble is by no means limited to old property, for it seems that a great many of the subsidy houses erected during the last two or three years have defective ceilings. In some cases practically all the houses on an estate are suffering from the defect. It will be said by some, no doubt, that this is the result of hurried workmanship and is not due to the method, and while it might perhaps be admitted that many of these houses were put up under difficulties, at the same time the trouble is so general that it indicates an inherent weakness in plaster ceilings. In any event the shortage of really skilled plasterers is a factor to be reckoned with, whilst the increased amount of vibration to which you allude in your article as a result of the increase in mechanically propelled traffic is something which ought not to be overlooked. All these indications seem to point to the necessity for revising the methods of ceiling construction. By the use of a good wallboard the danger of falling ceilings is entirely obviated. This material is easily and quickly fixed, and with the exercise of ordinary care and attention to the simple precautions that experience has shown to be necessary, satisfactory ceilings, that are, to all intents and purposes, permanent under the most severe conditions of vibration, will be secured."

DONCASTER STREET IMPROVEMENTS.

Mr. J. D. Wallis, Official Arbitrator, at Doncaster, heard the case of the Doncaster Corporation and the Doncaster Co-operative and Industrial Society, Ltd., concerning the Corporation's acquisition for the purpose of street improvements, of land, shop and premises, known as No. 58, St. Sepulchre Gate, Doncaster.

Mr. Jardine, for claimants, handed in the notice to treat and particulars of the claim, dated March 2, 1914, for £4,456. He said this claim was binding upon the claimants, but, as the notice to treat was served nine years ago, the property had an increased value to-day. The Co-operative Society, in consequence of the notice to treat, had bought other and larger premises on April 15, 1914, at the corner of Printing Office-street and St. Sepulchre Gate, for £8,000, and spent £4,224, between 1911 and 1923, on extensions. They continued trading at 58, St. Sepulchre Gate until June, 1914, and between then and September, 1914, the removal took place. For the remainder of 1914 they traded at the new premises and had the old premises on their hands. The Corporation took possession of the old premises on January 1, 1915. They bought the premises, No. 58, St. Sepulchre Gate on June 24, 1911, for £2,900, and they spent £605 on them. Their valuation of the property was now £4,500.

Mr. T. H. Johnson, architect and surveyor, Doncaster, giving evidence for the claimants, said that 58, St. Sepulchre Gate was one of the best business positions in the town. His valuation was £4,532. The rental value before the war was, in his opinion, £250.

In cross-examination by Mr. Schofield (counsel for the Corporation), Mr. Johnson said the new site was a better one. The price paid for that was £24 a yard with costs.

On behalf of the Corporation, Mr. Wm. Dawson, valuer, of Doncaster, submitted a valuation of £3,137 10s. He said he should take the site value of the new premises in 1914 at £20 a yard. The site value of the old premises in 1914 he would put at £15 a yard.

Mr. Sept. Hedley, valuer, of Sunderland, also giving evidence for the Corporation, submitted a valuation of £3,257.

The Official Arbitrator, who reserved his decision, has since awarded that the acquiring authority is to pay the owners the sum of £3,780 as purchase money and compensation, and the fees on the award, and £50 towards the costs of the owners.

NEW BUILDINGS IN SCOTLAND.

Leven.—Houses.—The T.C. is informed that the Board of Health is prepared to advance an annual payment of £432 for the municipal housing scheme, which, it is estimated, will enable the Council to build 60 houses—30 immediately.

Greenock.—Houses.—The Corporation proposes to erect 150 houses along a new street to be formed between Peat-road and Gateside.

Dundee.—Baths.—At a meeting of the T.C. held recently it was reported that the Baths Department required £5,000 for repairing the baths and washhouses.

Cove.—Church Renovations.—Efforts are being made to raise £1,500 for the renovation of the organ, the enlargement of the church hall, and the redecoration of the interior of the Cove and Killcreggan United Free Church.

Dunbar.—Houses.—The T.C. has been notified that estimates for the erection of 12 houses in Belhaven-road, under the Board of Health housing scheme, have been accepted. Under the original scheme the number of houses to be erected was 50.

Prestwick.—Houses.—The Dean of Guild Court has passed the following plans: Twenty-one houses in Mansfield-road, for Mr. D. Alexander; four houses in Bank-street, for Mr. J. McG. Owen, at an estimated cost of £2,600; Mrs. McKie, a house in St. Quivox-road, at an estimated cost of £1,500; Miss M. W. Gardiner, a house in Ayr-road, at a cost of £875; and Mr. T. Howie, a garage at "St. Ninians," at a cost of £145.

Oban.—Hall.—The Dean of Guild Court has passed plans for a hall in connection with the St. Columba Roman Catholic Pro-Cathedral, with seating accommodation for 352 people.

Dennistoun.—Villa.—Mrs. D. Herbert, Whitehill-gardens, Dennistoun, has presented plans for the erection of a two-story villa on the south side of Victoria-road.

Mossvale.—Houses.—The Lower Ward Committee of the County of Lanark has passed plans for two semi-detached houses for Mr. Hugh Cleland, Drumcavil-road, Mossvale, Chryston, near Glasgow.

Bonnyrigg.—Tenement.—The T.C. is erecting a tenement of from 20 to 24 houses, and have appointed Mr. Gray, architect, to carry out the scheme.

NEW COMPANIES.

The particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 & 117, Chancery-lane, W.C. 2, from the documents available at the Companies' Registry.

Grip Block Building Co., Ltd. (191,273). Registered July 12. Cranmore, Yarmouth, Isle of Wight. Builders, contractors, manufacturers, artificial stone manufacturers, &c. Nominal capital, £1,000.

J. Penzer, Ltd. (191,220). Registered July 10. Builders' merchants, &c. Nominal capital, £1,000.

Moor Park Gardens, Ltd. (191,197). Registered July 9. 36, New Broad-street, E.C. 2. Builders of flats and other residential buildings. Minimum subscribers, 7 shares. Nominal capital, £6,000.

Associated Paint Manufacturers, Ltd. (191,171). Registered July 7. To manufacture sell and deal in paints, oils, colours, &c. Nominal capital, £5,000.

H. Howard Edwards & Co., Ltd. (191,508). Registered July 24. To carry on the business of builders and contractors. Nominal capital, £1,000.

A. E. Simms, Ltd. (191,545). Registered July 26. 7, Upper Heath-road, St. Albans, Herts. Builders and contractors, wood and stone carvers, shop fitters, sanitary engineers and decorators, heretofore carried on at St. Albans under the style of A. E. Simms. Nominal capital, £1,000.

Gleave & Co., Ltd. (191,507). Registered July 24. Tile merchants, now carried on by Herbert Leigh Gleave and John Henry Ashworth at New-road, Blackpool, under the style of Gleave & Co. Nominal capital, £4,000.

F. Lewtas, Ltd. (191,481). Registered July 23. Plumber and contractor, now carried on by Fred. Lewtas at Tanners-lane, Pendleton, Lancaster. Nominal capital, £5,000.

Cook & Hooper, Ltd. (191,452). Registered July 20. 21, Orchard-street, Bristol. Builders, contractors and merchants, now carried on by Herbert Sales Cook and Harold William Percival Hooper in Bristol, under the style of Cook & Hooper. Nominal capital, £2,000.

George Green (Beckenham), Ltd. (191,421). Registered July 19. Dashwood House, New Broad-street, E.C.2. House agents, builders and contractors, &c. Nominal capital, £1,000.

John Tomlinson, Ltd. (191,425). Registered July 19. Builders and contractors and British and foreign timber merchants, now carried on by Thomas Withnell, James Withnell, Edward Withnell, and Albert Cottam, at Towngate, Leyland, Lancaster, under the style of John Tomlinson. Nominal capital, £10,000.

CURRENT PRICES FOR BUILDING WORK IN LONDON.*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	6
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	35	0
Add if in underpinning in short lengths	" "	7	6
Add if in floors 6 in. thick	" "	3	6
Add if in beams	" "	4	0
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	3	3

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	2	0	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	1
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	9	0
½ inch on flats in two thicknesses	" "	6	6
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	3

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	6
York stone sills fixed	" "	21	6
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	19	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	3
Do. joists	" "	5	9
Do. roofs, floors and partitions	" "	6	3
Do. trusses	" "	8	3

		½"	1"	1½"	2"
Deal rough close boarding	per sq.	38/-	44/-	50/-	80/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		½"	1"	1¼"	1½"
Deal-edges shot	per sq.		49/-	58/-	67/-
Do. tongued and grooved	"		54/-	65/-	72/-
Do. matchings	"	45/-	55/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	4
Deal-cased frames with 1 in. inner and outer linings, 1¼ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

		1¼"	1½"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/8	1/9	2/0
Deal shelves and bearers	"	1/5	1/7	1/10
Add if cross tongued	"	2d.	2d	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run.	0	9
Mahogany handrail; average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/4
Sash fasteners	11½d.	Mortice locks	5/3
Casement fasteners	1/5	Patent spring hinges and letting in to floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	17	0
Plain compound girders	"	20	0
Do. stanchions	"	23	0
In roof work	"	28	0

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/11	2/4½	3/7	4/-
Ogee Do. Do.	"	2/4½	3/1	3/10	4/9
Rain-water pipes with ears	"	2/9	3/7		
Extra for shoes and bends	each	4/4	5/11		
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	51	0
Do. Do. in flats	"	49	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run.	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	10d.	1/6	1/9	3/1	3/10	
Do. service	"	1/5	1/11	2/3	3/6		
Do. soil	"						6/2
Bends in lead pipe	each					3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"				14/7	19/6	
Bib cocks and joints	"	6/4	9/7	15/4	41/-		
Stop cocks and joints	"	15/4	17/2	25/8	64/-		

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	" "	2	6
Do. Do. Keen's	" "	3	6
Add sawn lathing	" "	1	5
Add metal lathing	" "	2	3
Portland cement screed	" "	1	10
Do. plain face	" "	3	0
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	9
26 oz. Do.	" "	1	1
Obscured sheet	" "	1	3
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	11
¼ in. wired cast plate	" "	1	5

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece	2/- to	4/-

* These prices apply to new buildings only. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

PROPOSED NEW BUILDINGS & OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEEN.—Plans passed: Dwelling-house and garage on the east side of Royfold-crescent, for the Misses Isabella and Jemima Reid, per Messrs. Brown & Watt, architects; alterations at Gray's School of Art, Schoolhill, for the Governors of Robert Gordon's Technical College, per Mr. R. L. Rollo, architect; garage, 25, Fonthill-terrace, for Dr. Theodore Shennan, per Messrs. D. & J. R. M'Millan, architects; two garages, Hope-street, for Mr. Edward Reid and Mr. Frank J. Whitehead, per Messrs. Sutherland & George, architects; garage and store, 39, Carlton-place, for Mr. Andrew Stott, per Mr. G. Bennett Mitchell, architect; garage, 1, Woodstock-road, for Mr. Robert M. Smith; garage, 46–48, Whitehall-road, for Miss M. Ross; alterations and additions, 34, Queen's-road, for Mr. J. H. Coutts, per Mr. A. H. L. Mackinnon, architect; golf club-house, for the Northern Golf Club, per Mr. William E. Gould, architect.

ABER VALLEY.—A welfare scheme by joint action by colliery companies, colliers and Miners' Welfare Grants Committee, involving an expenditure of £15,000 in constructive and ground lay-out work, has been framed for Aber Valley (Glam.); and Councillor William Morgan, miners' agent, has been elected secretary of committee.

ACCRINGTON.—The Accrington Co-operative Society, Ltd., propose to erect a new store and 11 houses on the Laneside Estate.

ALNWICK.—Plans passed by R.D.C.:—Bungalow, Fisher-lane, Alnmouth; garage at Newton-on-the-Moor; house near Shilbottle.

ALSAGER.—Structural alterations are proposed at the "Alsager Arms" Hotel, for Mr. W. Brocksbank.

AMMANFORD.—Grant of £1,994 towards improvement of Wind-street has been received by the U.D.C., and work is to be put in hand.——The U.D.C. has decided to demolish old buildings in Pentwyn-road and improve the corner, and is treating with church authorities and Bethany Chapel trustees for sanction to take back boundary walls for alignment of road.——The miners' lodges are treating for a site to build new public hall and library under Miners' Welfare scheme.

ANDOVER.—The Southampton C.C. proposes providing a new secondary school for girls at an estimated cost of £11,500.

ASHTON-UNDER-LYNE.—The Education Committee have instructed Messrs. John Eaton, Sons, & Cantrill, architects, Stamford-street, to prepare plans for the erection of a two-story school with accommodation for 600 children; also to submit an estimate of cost for a one-story building of a type suggested by the Board of Education. The T.C. has decided to erect 19 shops outside the market in Bow-street and Market-street, and have given permission to the Markets Committee to appoint an architect to prepare plans and estimates.

BACUP.—The T.C. has decided to purchase the Heath Hill estate, Stacksteads, and have given instructions to the builder to proceed with the erection of a further 20 houses of the parlour type.

BASINGSTOKE.—Lord Bolton, of Hackwood Park Basingstoke, has initiated a scheme to relieve the housing difficulty. In order to facilitate the building of houses for the working classes he has allotted frontages on four of the main roads leading out of Basingstoke, and convenient of access to the centre of the town. The sites each cover about a quarter of an acre, and are on roads which are already sewered, and have water, gas, and electricity services. These sites will be allotted to working men in the district desirous of acquiring their own freehold, and payments will be arranged on the deferred system. They are being rapidly acquired, and the scheme is so popular that it is believed the housing difficulty in the district will be fully met by Lord Bolton's liberality and enterprise.

BATLEY.—Plans passed: Handsome new offices at Blakeridge Mills, Blakeridge-lane, for Messrs. J. T. & J. Taylor, Ltd.; house at Norfolk-avenue, Carlton Grange, for Mr. B. H. Childs; two houses at Norfolk-avenue, Carlton Grange, for Messrs. G. & J. Mortimer, Ltd.; house and shop, Mill-lane, Hanging Heaton, for Mrs. Wood; and additions to premises in Town-street, Batley Carr, for Messrs. M. Watsamann & Son, Ltd.

BENTLEY.—Mr. M. G. Weekes, Inspector of the Ministry of Health, has conducted an enquiry into the application by the U.D.C. for permission to borrow £14,350 for the purpose of sewage works extension at Arksey-lane.

BIRKENSHAW.—Plans passed: Two houses, for Mr. Jackson Foster; two houses for Messrs. Jowitt & Grayshon; and new cowshed at Miazebrook, for Mr. E. Wigglesworth.

BISHOP'S STORTFORD.—Plans passed by U.D.C.:—Extension to maltings, Dane-street, for Messrs. Benskins; house, London-road, for Mr. Stevens.

BLACKBURN.—The Corporation have received sanction to proceed with the completion of the new arterial road from Brown Hill to Whalley Old-road, the work to be carried through by direct labour in relief of unemployment. Sanction has also been received for the erection of 97 dwellings on the Intack Estate, some of which will be flats. It is the intention of the Corporation to invite tenders for the erection of 36 of the houses. The Corporation have applied for sanction to borrow £30,000 for extensions to the twelve retorts at the Greenbank Gas Works, and the installation of twelve waste heat boilers.

BLACKLEY.—Messrs. W. Johnson & Son, architects, 27, Oldham-road. Miles Platting, are preparing plans for a detached house in Polefield-road, for Mr. G. J. Irving.

BLACKPOOL.—Messrs. Owen & Co., builders, 16, Talbot-street, Moss Side, Manchester, have secured a site in Cavendish-road, Bispham, to erect a detached and semi-detached houses, brick-built, slated or tiled roofs. Rough-cast and half-timbered, containing two reception rooms, kitchen scullery on ground floor, four bedrooms, bath-room, &c., on first floor, coal cellar and larder in basement, with labour-saving fittings. Work is to be commenced immediately.

BOGNOR.—The proposal of the U.D.C. to borrow a further sum of £5,000 for sewerage works, and £1,800 for an improvement of the roadway and promenade, has been before an inspector of the Ministry of Health (Mr. P. M. Croothwaite) at a local inquiry.

BOLTON.—Plans have been approved for structural alterations to the "Sir Sidney Smith," Bridgeman-street, and the "Bee Hive" Inn, Duke-street.

BRADFORD.—The erection of an infirmary at Daisy Hill is being considered. An offer of £100,000 has been made for the present premises for conversion into municipal offices. The B.G. has consented to the provision at the Daisy-hill Institution of a new entrance-lodge and attendant's residence, a stable, and extension of the dining-hall, at a cost not exceeding £2,650, and to the application of a portion of the proceeds of the sale of the Eastby Sanatorium for the purpose of defraying the aforesaid expenditure.

BRADSHAW.—The Parochial Council of Bradshaw propose to erect a memorial to the late Rev. R. J. Judson, M.A., in the form of a reredos carved in wood. It has been designed by Messrs. Bradshaw, Gass, & Hope, architects, 19, Silverwell-street, Bolton. The estimated cost is £200 to £250.

BRAMHALL.—Plans passed by the D.C.: Four houses, Nevill-road, for Messrs. Oakes & Kidd; shop and house, Buxton-road, for Messrs. Bancroft & Pixton; house, Douglas-road, for Mr. J. Moss; house, Carr Wood-road, for Mr. W. G. West; house, Bosden Fold-road, for Mr. J. Smith; 34 houses, North Park-road, and Glyn-road, for Residents, Ltd.; 10 houses, Offerton-lane, for Mr. A. Frost; house, Buxton-road, for L.M.S. Railway; new roads, Midland-road and North Park-road, for Messrs. Venables; and Ladythorn-crescent, for Messrs. Brocklehurst; 6 houses, Grenville-road, for Messrs. Oldham & Hallworth; house, Offerton-lane, for Mr. W. Swann. Mr. W. H. Snow, builder, 119, King-street, Stretford, has secured a site in Moss-lane to erect residences.

BRECONSHIRE.—The County Council is to widen Glais Bridge, Pontsam, and bridge over Dulas River, at estimated costs, respectively, of £500 and £400.——The Builth Wells U.D.C. will shortly invite tenders for foundation work and lay-out in connection with the War Memorial scheme.

BRIDGEND.—The U.D.C. has passed plans for four new houses at Merthyrmawr-road for Messrs. Hitt & Morgan. The Penybont (Bridgend) R.D.C., at instance of Ministry of Health, will erect new maternity centre, estimated to cost £2,000, and has invited Bridgend U.D.C. to share scheme. The Glamorgan C.C. has notified R.D.C. of site selection for new school at Pontrhydycyff and Penybont R.D.C. is selecting site for proposed school at Pyle. Estimates submitted to Penybont Council for building of generating station at Kenfig Hill, distribution of cables, &c., in connection with proposed electricity scheme, amounting to £28,760 initial capital expenditure.

BRIERFIELD.—Plans passed by U.D.C.: For conversion of house, 26, Sackville-street, into house and lock-up shop, for Mrs. M. A. Pickles; for conversion of house, 14, Ann-street, into house and shop, for Mrs. Parker.

BROCKENHURST.—Addition to buildings at the County School are proposed by the Southampton C.C., estimated to cost £4,264.

BURNAGE.—Mr. H. M. Emery, builder, 38, Errwood-road, Levenshulme, proposes to erect shops on a site in Burnage-lane.

BURNLEY.—Plans approved at a meeting of the Improvement Committee: Two houses, Queen's-road, for Messrs. Butson, Clegg & Holdsworth; additions, Victoria Hospital, for the Board of Management; house, Barden-lane, for Mr. G. A. Jobling; alterations, 2, Lowerhouse-lane, for Mr. Herbert Draper; eight houses, Marsden-road, for Mr. W. Taylor; additions to kitchen and pay-box, Savoy Café Cinema, Manchester-road, for Messrs. Savoy (Burnley), Ltd.

BUXTON.—Plans passed by T.C.: House in St. John's-road, for Mrs. H. Wood; lavatory at the King's Head Hotel, for Messrs. Marston, Thompson & Evershed, Ltd.; gravel store in Ashwood Dale, for Mr. Norman Axe.

CAERPHILLY.—Structural alterations to the "Star" Inn, Nantgarw, are to be undertaken by the Rhondda Valleys Brewery Co., Pontypridd.

CARLISLE.—Plans passed by R.D.C.:—Mr. Stead, Dalston Hall, additional farm buildings at Low Cummersdale Farm; by Mr. H. E. Ayris, architect, Lowthersteet, on behalf of Mr. F. H. Oldfield, Scotland-road, Stanwix, for a pair of semi-detached houses near Whitecrosegate.

CHARTHAM.—The Kent C.C. has decided to enlarge the asylum at a cost of £60,000 (including equipment).

CHELTENHAM.—Plans passed by T.C.:—H. Webb, alterations, 187, High-street; J. Lethbridge, additions, 27, Grosvenor-street; J. Holman, additions, 13, Great Norwood-street; Mrs. E. Courteen, house, Leckhampton-road; Miss F. Acock, house, Whaddon-lane; A. Edwards, motor house, Old Bath-road; Miss Mortlock, house Whaddon-lane; H. Greaves, motor house, Donabate, St. George's-road; G. H. Roberts, additions to stables, Alexandra Villas, Hewlett-road; Sharpe & Fisher, Ltd., store building, Swindon-road.

CHESTER-LE-STREET.—The U.D.C. has decided to ask the Ministry of Health to sanction the erection of 250 more houses on the Council's building estate.

CRUMPSALL.—Mr. F. E. L. Harris, architect to the Co-operative Wholesale Society, Ltd., 99, Corporation-street, Manchester, has prepared plans for a detached house to be erected in Park-road, Crumpsall, for Miss E. L. Stephenson.

DARWEN.—The Health Committee recommend the T.C. to spend £2,000 on improving accommodation for nurses at Bull Hill Hospital.

DEAL.—Plans passed by T.C.:—Alterations at 12 and 14, Victoria-road; two houses in Stanhope-road, for Mr. J. Howland; two detached houses in Church-path, by Mr. G. E. Tournay.

DELPH.—It was decided to invite tenders for the erection of Council houses. Tenders had come in, but not being endorsed, they had been opened in mistake. Under the circumstances, it was decided to invite tenders in a new form.

DEWSBURY.—Plans passed by T.C.: George Benson, workshop, Edge Top-road, Thornhill; W. C. Wakefield, two bungalows, Church-lane, Thornhill; H. Burton, shed, off Wakefield-road, Chickenley; J. C. Crawshaw, additions, Holly-bank, Halifax-road; A. Barker, dwelling-house, Thornhill Cross; Warwick & Co., garage, "Waggon and Horses Inn," Chickenley Heath; G. Gallagher, addition to house, Arroyd-street; W. C. Wakefield, two houses, Deadman's-lane, Thornhill; Camroyd Motor Co., service depot, Leeds-road; Yorkshire (W.D.) Electric Tramways, Ltd., extension of motor garage, Tram Depot, Savile Town; H. Mayman, extension to "Mayville," Oxford-road; Mrs. E. A. Simpson and Mrs. B. Sterry, two dwelling-houses, Earlsheaton Common. The Technical School is to be fitted with a mining laboratory at a cost of £426.

DUKINFIELD.—Messrs. W. Kenyon & Sons, Ltd., Chapel Field Ropery, are constructing a new tennis court for the use of their employees.

DUMBARTON.—Another instance of the enterprise of Dumbarton Building Society (Limited), was given in the Dean of Guild Court when plans were presented for the erection of 21 cottages on a site fronting Silverton-avenue in the Newtown district of the burgh. The plans were passed. Each house will consist of a living-room, kitchenette, three bedrooms on upper floor, bath-room, and other conveniences, and will be electrically lit throughout. Six of the houses will be allocated to ex-Service men.

DURHAM.—Plans passed by T.C.:—Dean and Chapter, boarding-house adjoining Langley House; Co-operative Society, lavatories, &c., at Claypath.

EALING.—At its last meeting the T.C. passed plans for the erection of six new shops and nine garages in Uxbridge-road, Ealing Common, 22 lock-up garages in Elers-road, at the rear of Nos. 104–55, Northfield-avenue, 10 lock-up shops in Northfield-avenue, three houses in Carew-road, four in Tring-avenue, one in Raymond-avenue, one in Park-View-road, and one in Castlebar Park (for Sir John Young). Plans were also passed for St. James's new vestry hall, the Ealing Chamber of Commerce £1,000 house in Camborne-avenue, and the extension of Ealing Hospital.

EARSDEN.—Plans for the erection of a branch store at Castle Park, Backworth Village, by the Backworth Co-operative Society have been passed by the U.D.C.

FAILSWORTH.—Manchester Licensing Justices have approved plans for sanitary alterations to the "Bridge" Inn, for Mr. T. Barnes.

FARNHAM.—Application is to be made to the Ministry of Health by the U.D.C. for approval of a scheme for the provision of an additional 30 working-class dwellings, to contain three bedrooms each, 20 of a non-parlour and 10 of the parlour type, and to the building of two pairs of houses upon the remainder of the Weybourne site, and a block of three houses upon a site belonging to the Council fronting Ridgway Hill-road.

FISHGUARD.—A site has been obtained for a new parish hall to be built for St. Mary's Church.

FOLESHILL.—A legacy of £1,000 left by Miss Nicklin to St. Laurence's Parish Church, Foleshill, is to be devoted towards enlarging the fabric.

GLYNCORRWG.—The U.D.C. has obtained sanction to put in hand work of constructing new culvert at Abergwynfi, to cost, estimate, £2,000. The Ministry of Health is considering application of U.D.C. to undertake road and bridge widening work at Abergwynfi.

GORTON.—Messrs. Thorpe & Collin, architects, 66, Deansgate, Manchester, are preparing plans for a garage to Lonsdale House, Hyde-road, and Break Range, Gorton, for Mr. R. Ashworth, and for the conversion of house, Hyde-road and Ashwood-avenue into shop and house, for Mr. R. Dewhurst.

HAILSHAM.—Plans passed by R.D.C.:—Bungalow on Hammonds Farm, Laughton, for Mr. George Ancill; house at Stonehill, Chiddingly, for Mr. E. R. Vincent; house at Upper-street, Ninfield, for Mr. W. H. Burt; bungalow, near Beestons Farm, Warbleton, for Mr. P. G. Barrow.

HALIFAX.—The Borough Surveyor has been instructed to obtain tenders for the erection of new tramways and parcels offices on a site in Powell-street. The Corporation are seeking sanction to borrow £13,000 for the erection, and £1,400 for the land from the Ministry of Health.

HEALD GREEN.—Mr. A. Hollows, builder, 27, Elmsmere-road, Didsbury, is erecting houses on a site in Finney-lane.

HORSFORTH.—The proposed new road and bridge at Calverley have been approved by the West Riding C.C. Work is to be commenced at once; the estimated cost is about £137,000.

HOVE.—A scheme for the erection of a "luxury" pier, at a cost of £180,000, is reported nearing completion at Hove. The principal directors of the company responsible for the scheme are stated to be Sir Charles Ruthven, Sir Cecil Partridge, and Alderman S. Isger, a member of Hove Town Council. The company will be known as the Hove Pier, Theatre, and Kursaal Co.,

and the pier, 1,250 ft. long, and designed by Mr. H. Hoyne Fox, for many years chief architect and engineer to the Government of Burma, will be built of ferro-concrete on a site at the western end of the front. The scheme is to include a theatre seating 1,400 people, a kursaal, and a dance or concert hall accommodating 1,000 people. The principal floor of the kursaal is to be used as a residential club.

KINGSBURY.—The Ministry of Health has intimated to the U.D.C. that it will be prepared to approve a scheme for the erection of 24 houses. The original scheme was for 48 houses.

KNOWLE.—The Solihull magistrates have granted a provisional licence for the erection of a cinema with approximate seating accommodation for 250 persons, to John E. Chamberlain, of Knowle.

LEEDS.—The Finance and Parliamentary Committee is recommending the City Council to purchase the Chapeltown Barracks in the city for £12,000, for the purpose of utilisation under the Blind Persons Act. The buildings and estate, which cover 53,000 square yards, will be turned into hostels and workshops for the blind.——The B.G. propose erecting new offices for Armley and Bramley overseers, at an estimated cost of £2,100.

LITTLEBOROUGH.—Plans have been approved for structural alterations to the "Royal Oak" Inn, Summit.

LLANELLY.—The Electric Lighting and Traction Co. have applied for an order to extend area of supply to outside districts, and notice is given that Electricity Commissioners propose recommending order be made. ——The B.C. is to carry out extensive widening scheme of Thomas-street.——The G.W.R. Co. has notified B.C. that plans for proposed new railway station at Llanelly have now been drawn, and Directorate is to consider them: the Council expect, in consequence, work will soon be put in hand.——Hospital Management Committee was reported to B.C. to have under consideration purchase of new motor ambulance.——The B.G. is to erect a tramp ward at rear of Workhouse, at estimated cost of £2,000.

LLANHARAN.—The Trustees of Carmel Baptist Chapel are to erect new building to seat 500 people instead of present structure. Large schoolroom is to be included in scheme, the architect of which is Mr. J. H. Davies, architect and surveyor, Pontypridd.

LONDON.—The contract for the improvements at Surrey Commercial Docks, part of the Port of London Authority's £5,000,000 unemployment relief works, has been placed with the Westminster firm of Topham, Jones & Railton. The plans provide for a new dock, with a passage 80 ft. wide, within the triangle now occupied by the Canada, Centre and Quebec ponds, which will afford five additional ship-berths each 400 ft. in length.

LONDON (GREENWICH).—Drainage plans passed by B.C.:—Mr. Herbert Ashworth, for Guardians of the Greenwich Union, at premises on the Institution side of the Estate; Messrs. Wm. Mills & Sons, Ltd., at 33 to 63, Delafield-road; Wright & Handisyde, at 24, 30 and 32, Old Dover-road; Mr. George Redgrove, at Nos. 22 to 32, Winforton-street; Messrs. De Zoysa & De Zoysa, at 14, St. John's Park Mews, Blackheath; Mr. Edward Proctor, at 9, Shooters Hill-road; Mr. T. D. Leng, at Messrs. J. Stone & Co.'s premises, East side of Anchor and Hope-lane, Charlton.

LONDON (WESTMINSTER).—It is announced by Electric Railway House, Westminster, that Piccadilly-circus Underground Station is to be rebuilt. The new station, it is stated, will be about 15 ft. immediately below the circus. A broad subway under the circus, completely encircling the booking-hall, will be a feature. Seven entrances will be provided: Two on either side of Regent-street, two on either side of Messrs. Swan & Edgar's, one at the corner of Glasshouse-street, one at the corner of Shaftesbury-avenue, one at the site of the present Tube station. The proposed station will be oval in shape, with a large circulating area, from which separate escalators will connect with the Bakerloo and Piccadilly lines, thus dispensing with the present lift service. In all there will be six escalators—a record for any one station.

LONGTOWN.—Plans passed by R.D.C.:—By Mr. Foxall, architect, for Memorial Hall at Longtown; Mr. Thomas Watson, Newcastle-on-Tyne, house near Longtown; house at Stoney Gate, Nicholforest, for Mr. P. H. Holt.

LOUGHBOROUGH.—The justices have approved of plans for the rebuilding of the "Rose and Crown" Inn, for Messrs. Everard & Co.

MANCHESTER.—The authorities of the Salvation Army have secured a site on the junction of Osborne-road and Moss Brook-road, Harpurhey, where they propose to erect a new hall, estimated to cost £7,000. Accommodation will be provided for 450 adults and 350 children. No plans have yet been approved. The local secretary is Mr. E. Donaugh, 28, New-street, Moston. A new branch bank to be erected in Ashburton-road, Trafford Park, is proposed for the London Joint City and Midland Bank. The Manchester E.C. have decided to purchase a site for a new school adjoining Gorton Mount Estate, at a cost of £1,252. The Manchester City Architect, Mr. H. Price, F.R.I.B.A., has submitted plans prepared in his department for the erection of new police headquarters on the site in Jackson's-row, owned by the Manchester Watch Committee. Sanction has been obtained to borrow £627 for re-roofing certain Heaton Park hut-ments, and instructions have been given for the work to be put in hand. The Manchester Public Health Committee are proposing a Children's Hospital at Abergele, to provide accommodation for 200 children, and application for sanction is being made to the Ministry of Health. Plan of tramway siding in Mount-street, Oldham-road, Newton Heath, approved by the Manchester City Council, and subject to the necessary consents being obtained, instructions given for the work to be carried out. The Textile Paper Tube Co., 3, York-street, Manchester, are proposing to erect a new factory on a site at Romiley, near Stockport.——Mr. A. Rangeley, architect, Kilvert's Buildings, Withy-grove, Manchester, is preparing plans for alterations to printing works Mark-lane and Pump-yard, for Messrs. E. Hulton & Co., Ltd.——Mr. N. H. Hacking, architect, 5, Blackfriars-street, Manchester, is preparing plans for a large billiard hall to be erected on a site in Upper Chorlton-road, for the Brooks's Bar Billiard Co.——Mr. E. Dawson, architect and surveyor, 49, Deansgate, Manchester, has prepared plans for additions to premises, 15, Oak-street and Copperas-street, for Mr. W. H. Meadow-croft; Mr. F. Fenn, architect, 11, Chapel Walks, Manchester, has prepared plans for alterations to premises, 30, Oldham-road, Miles Platting, for Mr. H. Bellinger; Mr. A. McDonald, architect, 71, Meadow-street, Moss Side, has prepared plans for alterations to shop premises, 85, Bury New-road, for Mr. G. Segel. ——Messrs. Rhodes & Dunseath, builders, 47, Wood-road, Whalley Range, have secured a site in College-road, for the erection of houses.

MERTHYR.—The T.C. is to start as soon as possible on sewer laying from Quaker's Yard to Troedyrhiw, and sanction to borrow £26,000 for the purpose has been sought.

MERTHYR TYDFIL.—The B.G. has decided to under-take extensions at Workhouse and installation of new heating plant, &c., at estimated cost of £13,700. Of this, erection of boiler house and laundry extension building work is estimated at £3,000, other building work and setting of boilers £2,000, and £9,000 cost of machinery and fittings.——Messrs. John Lewis, motor engineers, Merthyr and Cardiff, announce that they intend building new garage to accommodate 120 cars to replace that recently gutted by fire.

MIDDLETON.—Mr. Harrison, Borough Surveyor, has been requested to prepare provisional plans for a proposed new arterial road between Bolton and Oldham, which will concern the urban districts of Royton, Chadderton, Middleton, Prestwich, Whitefield, Radcliffe and Little Lever.

MONMOUTHSHIRE.—The County Education Committee is to build new central school at Cwmbrau, on land acquired for the purpose.——The Abersychan U.D.C. is to erect 40 houses, sanction having been obtained from the Health Ministry; the Council is to make £100 grant per house erected by private enterprise in the area.——The U.D.C. has received estimates for the electricity supply scheme for the district, showing initial expense of £15,000 on sub-station erection, plant and cables, &c.

MYNYDDISLWYN.—The U.D.C. is purchasing land for widening of Penllau-lane, and is arranging with Tredegar Estate for taking over of land adjoining Victoria-road, Fleur-de-Lis, for widening scheme.—— The U.D.C. has requested L.M. & S. Railway Co. to erect without further delay the footbridge at Pont-llanfraith.——The U.D.C. has received notification of financial assistance from the Monmouthshire County Council toward cost of widening South Ward bridge, the work to shortly be put in hand.

NARBETH.—Plans passed by R.D.C.: Dwelling-house for Mr. P. George, Danlau, Llandissilio; and bungalow for Mrs. S. Janes, Temple Bar, St. Issell's.——The R.D.C. is commissioning Mr. Edward Morgan, architect, Pendine, to draw plans for two new bridges to be erected at Vicar's Mill and Maencliochog Mill.

NELSON.—The Corporation have decided to purchase a Fordson tractor and a stone-crushing machine and power plant on the recommendation of their Water Engineer; also small tipping Jubilee wagons, steel girders, and coping stone for the new road and bridge at Barley. Tenders are to be obtained for the laying of a new 18 in. main from Ridgaling to Railway-street, a distance of about 5,000 yards, and for repairs to the overflow channel at Walverden Reservoir. Tenders are to be obtained for painting six cottages belonging to the Corporation in Every-street. Application is to be made to the Ministry of Health for sanction to borrow £50,459 for renewing and relaying light railway track.——Plans passed by the Corporation: For Memorial Institute off Wickworth-street, for Messrs. J. Nelson, Ltd.; layout of portion of Scholefield Estate, for executors of Mr. G. Proctor; bungalow off Halifax-road, for Mr. J. Loxham; shop front in Market-square, for Mr. A. Ashworth; two bungalows in Barkenhouse-road, for Mr. H. Ratcliffe; additions to workshop, for Messrs. Fryer & Co.; shop front, 213, Every-street, for Mr. J. Houldsworth; offices and garages in Scotland-road, for Mr. J. Judson.

NEWPORT (MON.).—The Works Committee of B.C. are preparing road improvement schemes for early carrying out. The Newport Trades Council is urging the Corporation to dispose of housing sites to speculative builders. The Corporation has assented to British Manneswaun Tube Co. erecting 12 houses at Ysgitty-lane and has adopted plans for erection of four houses at Chepstow-road, and houses at Hubert-road and Allt-yr-yn-road.

NEWTON HEATH.—Messrs. R. & J. Dempster, Ltd., Chapter-street, Newton Heath, have had plans prepared in their drawing office for a manager's room, rest room, and lavatory accommodation as an addition to their works.

NORDEN.—The D.C. has approved a recommendation of the Improvements Committee to build new Council Offices on land adjoining the existing accommodation.

OLDHAM.—The Board of Education have approved plans for the Oldham E.C. for the erection of a new school on a site in Heron-street, with accommodation for 400 children. The building is being planned so as to provide for extensions as the need arises.

PANGBOURNE.—A pavilion is to be built at the Nautical College as a memorial to the late Mr. P. J. de Paravicini.

PEMBROKE.—Plans passed by R.D.C.: Proposed memorial hall at Castlemartin, and for bridge to be erected at Quoit's Mill.——Mr. A. J. Howell, School-house, Lamphey, has applied to R.D.C. for grant assistance towards proposed new dwelling-house to be erected for him.——The Council is applying for sanction to borrow £10,000 for road works, chief of which are: Scoveston-Milford-road, £3,750 (estimate), and Freshwater-Lamphey-road, £4,625 (estimate).

PENARTH.—Negotiations are reported to be near completion for acquisition by the U.D.C. of the pier and rights of owning company. The Council entertain repairs and rebuilding at a cost estimated at between £7,000 and £9,000.

PONTARDAWE.—The R.D.C. has decided to make a grant of £100 in respect to each house erected by private enterprise.

PRESTON.—The Grammar School Governors have decided on a scheme for an extension to the school. Plans are being prepared by the Borough Surveyor, Mr. J. C. Bullough, A.M.I.C.E., for an additional seven class rooms and the necessary cloak-room and lavatory accommodation. No contracts have yet been placed.——Preston Library Committee is adopting the "open access" system at the lending library, and tenders are to be invited for the re-installation of the electric lights and laying of floor covering necessitated by these alterations.

ROCHDALE.—Plans have been approved by the Watch Committee for structural alterations to the Theatre Royal, including sanitary accommodation, which were a condition of the granting of an excise licence.

SANDBACH.—For relieving unemployment during the winter the U.D.C. has decided to undertake the sewering of Cold Moss Heath and Back-lane, estimated to cost £1,600.

SCARBOROUGH.—At a meeting of the T.C. in committee, matters relating to housing were dealt with and it was decided to adopt a scheme to encourage the erection in Scarborough of houses by private enterprise under the provisions of the latest Government policy. Failing the erection of houses by private enterprise the Corporation will erect them. It is proposed that altogether 288 houses shall be built, 118 on the Seamer-road estate, and 170 on the Klondyke estate, the land adjoining the new road from Manor-road to Scalby-road.

ST. ANNE'S-ON-SEA.—The T.C. has decided to enlarge the St. Anne's Council School, which is over-crowded, and has given instructions for plans to be prepared.

STOURBRIDGE.—Plans passed by T.C.:—House, Eggington-road, for Mr. E. R. R. Tooby; house, Unwin-crescent, M. H. O. F. Webb; bungalow, Ridge-street, Mr. J. R. Perks; alterations to the "Barley Mow" Inn, High-street, Wollaston, the Wolverhampton and Dudley Breweries Ltd.; house, Bridle-road, Mr. Langford; garage, "The Croft," Hagley-road, Major King; house in Ham-lane, Mr. B. Dunn; new boiler seating at Stourbridge Model Laundry, Hagley-road.

SUNDERLAND.—The contract for the construction of the Mill Hill reservoir, near Easington, has been given to Messrs. Brims & Co., Ltd., of Newcastle, and 2, Victoria-street, Westminster. This is the larger of two service reservoirs to be constructed for Sunderland & South Shields Water Co., and will hold 12,000,000 gallons.

SWANSEA.—The Council has decided to advance to a public utility society under the Housing Act 90 per cent. of the cost of building 250 houses at Winchwan, Swansea; 100 houses are to be commenced at once. The employees of the Swansea Vale Spelter Company are especially being provided for.

THURLSTONE.—The U.D.C. has approved of a plan for a house at Hornthwaite Hill, for Mr. B. Marsh.

TREDEGAR.—Estimates for road and bridge work in connection with new Tredegar-Talybont-road have now been presented and approximate on £80,000. A joint local authority committee has the matter in hand.

WALTHAMSTOW.—Plans passed by U.D.C.:—Office and workshop, St. Mary-road, S. W. Robinson; alterations, Tower Hotel, Hoe-street, W. A. Lewis; garage, Byron-road, H. Butler; two dwelling-houses, Gordon-avenue, H. Iles; extension to saloon with lavatory accommodation, Higham Hill Tavern, S. A. S. Yeo; three dwelling-houses, Bromley-road, West Bros. & Pettitt; dwelling-house, garage and store, Aubrey-road, R. J. Paul; dwelling-house, 40, Beulah-road, J. C. Meadows; house and shop, corner of Billet-road and Folly-lane, R. J. Paul; garage, Lea Bridge-road, R. J. Paul; alterations, "Nag's Head" P. H., Sterns.

WAREHAM.—Plans passed by T.C.:—Cottage for Mr. Churchill.

WEYMOUTH.—Having completed the Greenhill Gardens extension scheme, the Corporation is now considering other big town improvement schemes. It has been decided to build a new concert pavilion in the Alexandra Gardens, and also to widen the esplanade leading to the gardens and pavilion, at a cost of £10,000.

WHITWORTH.—The Parochial Church Committee has decided to proceed with rebuilding the Lloyd-street Schools, recently burnt down. Mr. W. Archer, the District Surveyor, has been asked to prepare plans.

FIRES.

BRADFORD.—Damage estimated at £50,000 has been caused by fire at the mill belonging to Messrs. Brooks-banks, Horton-road, a portion of which was sublet to Messrs. Lister & Co., Ltd., silk spinners, of Manningham Mills.

BATTLE.—A serious fire has occurred at Beauport Park, Battle, the residence of the late Sir Archibald Lamby.

COGGESHALL.—A fire has occurred which has greatly damaged the seed warehouses of Messrs. E. W. King & Co.

EDINBURGH.—A serious fire has occurred at the works of Messrs. William M'Ewan & Co., Ltd., Fountain Brewery.

GLASGOW.—An outbreak of fire occurred in premises at 71, Mitchell-street, Glasgow, occupied by Mr. Francis Smith, cabinetmaker and upholsterer.

LONDON.—A serious outbreak of fire occurred on Saturday at the Wells Club, Old Bond-street.

SALTBURN.—Damage estimated at £4,000 was done by a fire which occurred at Lune-street. A motor garage, which belonged to Harold Brown, motor engineer, was gutted and the Workmen's Constitutional Club premises adjoining were much damaged.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.

ABERAYRON.—For erection of Memorial Hall, for the fund guarantors :—

*Calways, Ltd., Swansea	£3,370

ABERDEEN.—For constructing the section of the new aqueduct between Banchory and Crathes, for the T.C. :—

*T. Piggott & Co., Ltd.—Steel pipes	£35,118 0 0
*Macfarlane, Strang & Co., Ltd. Special pipes	3,078 0 9
*William Tawse, Aberdeen—Laying pipes	24,973 4 10
Total	£63,169 5 7

ABERDEEN.—For building scheme at Schoolhill and Blackfriars-street in connection with Art Gallery extension, for the T.C. :—

	Memorial Court.	Cowdray Hall, &c.	Gallery Extension.	Total.
*Geo. Hall's Trust—*Mason*	£17,958	£11,785	£7,931	£37,674
*R. & J. Reid, Ltd.—*Carpenter*	1,109	2,399	2,788	6,296
*Geo. Farquhar—*Slater*	13	269	230	512
*Fleming Bros.—*Steel*	157	846	573	1,576
*Scott & Sons, Ltd.—*Asphalte*	143	—	28	171
*Roger & Baxter—*Plasterer*	459	656	328	1,443
*Youden & Son—*Marble*	1,679	1,347	—	3,026
*Roger & Baxter—*Concrete*	2,405	1,114	866	4,385
*A. M'Robb—*Plumber*	190	562	434	1,186
*James M'Laren—*Painter*	145	241	253	639
*Claud Hamilton, Ltd.—*Heating*	677	526	374	1,587
*James C. Laing—*Electrical*	245	194	136	575
	£25,180	£19,949	£13,941	£59,070

ANDOVER.—Erection of secondary school for girls, for the Southampton C.C. :—

†W. E. Chivers & Son	£10,326

BATLEY.—For the erection of new offices for Messrs. J. T. & J. Taylor, Ltd., at Blakeridge Mills. Mr. W. Hanstock, Architect, Batley :—

*Goodall Bros., Batley.

BEDFORD.—For alterations and new staircase as approach to rooms in tower of the Boys' Modern School, for the Governors of the Harpur Trust. Mr. George P. Allen, F.R.I.B.A., architect and surveyor, 79, High-street, Bedford :—

Mr. H. Bowler	£160
Mr. S. Foster	149
*J. Corby & Son	129

All of Bedford.

BEDFORD.—Alterations and decorations, &c., to the Moravian Buildings, Bedford School, for the Governors of the Harpur Trust. Mr. George P. Allen, F.R.I.B.A., Architect and Sureyor, 79, High-street, Bedford :—

Mr. S. Foster	£522 18 6
J. Corby & Son	516 14 0
Mr. W. Laughton	510 0 0
Mr. H. Bowler	499 10 0

All of Bedford.

BEDFORD.—For new demonstration and science benches and other work in connection with same at the Girls' High School, for the governors of the Harpur Trust. Mr. George P. Allen, F.R.I.B.A., Architect and Surveyor, 79, High-street, Bedford :—

Mr. S. Foster	£275 0
*J. T. Hobson & Co.	232 10

All of Bedford.

BLACKPOOL.—For the erection of a new secondary school for girls :—

*J. Parkinsons (Blackpool), Ltd.

BRADFORD.—Erection of 270 houses on Odsal housing site, for the T.C. :—

*T. Roper & Sons—

104 in blocks of 2, Class "A," rough cast above first floor string level, at £344 each	£35,776
46 in blocks of 2, Class "A," faced with brick full height, at £339 each	15,594
8 in blocks of 4, Class "A," rough cast above first floor string level, at £344 each	2,752
60 in blocks of 4, Class "A," faced with brick full height, at £339 each	20,340
12 in blocks of 2, Class "A2," rough cast above first floor string level, at £329 each	3,948
12 in blocks of 2, Class "A2," faced with brick full height, at £324 each	3,888
16 in blocks of 2, Class "B," type No. 1, rough cast above first floor string level, at £409 each	6,544
12 in blocks of 2, Class "B," type No. 2, rough cast above first floor string level, at £404 each	4,848
270	£93,690
Extra length of electric main to above houses, at £3 per house	810
Total	£94,500

BRADFORD.—For asphalting work at Woodroyd and Lorne-street Schools, for the T.C. :—

*W. Ingram & Co.	£761 2 6

BRADFORD.—For supply of boilers to various schools, for the T.C. :—

*S. Parsons & Co.	£513

BRADFORD.—For (*a*) heating installation; and (*b*) electrical installation, at Myopes School, Daisy Hill, for the T.C. :—

*(*a*) F. & H. Mears	£405 0
*(*b*) Smith & Croft	113 7

BRIDGWATER.—Erection of Wesleyan Sunday School and Memorial Hall. Messrs. Samson & Colthurst, Architects :—

*C. Bryner, Jun., Bridgwater.

BUXTON.—For alterations to the Buxton and District Cottage Hospital. Mr. Chas. Flint, architect, 5, The Quadrant, Buxton :—

J. Robinson, Buxton	£4,887 14 6
Redyard & Son, Ashton-under-Lyne	4,775 0 0
H. Boar & Son, Ltd., Sheffield	4,340 10 3
E. Marshall & Son, Ashton-under-Lyne	4,300 0 0
*H. Robinson, Buxton	4,290 0 0

CRANBROOK.—For carrying out Goudhurst drainage scheme, for the R.D.C. :—

*T. Ashenden, Hawkhurst	£442 12 2

CRIGGLESTONE.—For the erection of two houses for Messrs. Massie & Holdsworth :—

*J. Crossley, Jun.—*Builder*.
*T. Craggs—*Joiner*.
*H. & W. Parker—*Slater*.
*T. E. Senior—*Plasterer*.
*T. Bradley—*Plumber*.
All of Wakefield.

DERBY.—For the erection of new headquarters, for the Derbyshire Territorial Association, at Mansfield :—

*Rogers & Crookes, Mansfield	£7,364 2

DEWSBURY.—For the erection of a new imbecile block at the Staincliffe Institution, for the B.G. Mr. Hanstock, Architect, Batley :—

*Hinchliffe Oldroyd, Ossett—*Mason*.
*S. Armitage & Son, Dewsbury—*Joiner*.
*J. Iredale & Son, Birstall—*Plasterer*.
*J. F. Rispin, Batley—*Electrical engineering*.
*F. Newsome, Ltd., Dewsbury—*Plumber*.
*J. Kellet, Morley—*Slater*.
*J. Shepley, Dewsbury—*Painter*.
Total cost £6,500

DONCASTER.—For the erection of 75 houses, for the Corporation :—

*W. & A. Forsdyke, Ltd., Sheffield	£27,800

DONCASTER.—Extension of Balby Workhouse Infirmary, for the B.G. :—

*T. Jenkinson & Son	£6,189

EDGWARE (MIDDLESEX).—The development of the Edgware Manor Estate, Edgware, is proceeding, and the following tenders have been accepted :—

For eight shops and flats over, adjoining the new tube station—

*Miskin & Sons, Ltd., St. Albans	£21,382

Roads and sewers (Section 1)—

*Howard Farrow, Golders Green	2,691

FLIXTON.—For reconstruction of "Greyhound" Hotel, Flixton, for Messrs. Threlfall's Brewery, Ltd., Salford :—

*J. T. Hollinworth & Son, Patricroft.

GATESHEAD.—For the erection of a new library in Prince Consort-road. This was the lowest of thirteen tenders :—

*Alex. Pringle, Ltd., Gateshead	£22,208

GLASGOW.—Erection of Queen's Park bowling and tennis pavilion, for the T.C. :—

*J. Porter & Son—*Excavator and brick work*	£613 19 9
*G. Eaglesham—*Carpenter and joiner works*	470 9 5
*P. White & Co.—*Slater and roughcasting works*	78 11 11
*J. Anderson & Co.—*Plumber work*	96 12 6
*W. Reid & Sons—*Plaster work*	38 0 8

GLASGOW.—For (*a*) 30 in. gas main to Dawsholm Gasworks; (*b*) foundations of same, for the T.C :—

*(*a*) Ashmore, Benson, Pease & Co.	£3,795 0 0
*(*b*) Grays Ferro-Concrete Co.	662 7 1

GLASGOW.—For electric lighting installation at lairage extensions at Merklands Cattle Wharf, for the T.C. :—

*Haddow & Co.	£347 11

HALIFAX.—For conversion of premises into electricity showrooms, in Town Hall-street East, for the Corporation :—

*J. Lees & Son, Halifax	£1,333 19

HAMPSHIRE.—For annual repairs and painting at schools, for the Southampton C.C. :—

Hythe.

*E. J. Kingham	£186 9

Ringwood.

*Barrow Bros.	170 3

Totton.

*Creighton & Son	268 0

KEITH.—For the erection of houses, for the T.C. Mr. G. J. Lobban, Architect, 2, Station-road, Keith :—

*Chas. Webster & Son, Newmill, Keith—*Mason work*.
*John Cormack & Son, Keith—*Carpenter work*.
*Chas. Dickie & Son, Tunriff—*Slater work*.
*Angus Joss & Son, Keith—*Plumber work*.
*Geo. Hume & Son, Keith—*Plaster work*.
*John Symon, Keith—*Glazier work*.
Type plans altered. Schedule rates accepted.

LEATHERHEAD.—For (*a*) repairs to Surrey House; and (*b*) central heating, for the U.D.C. :—

*(*a*) Leatherhead Building Co.	£386 7 6
*(*b*) Blaker Bros.	107 15 1

LEATHERHEAD.—For making up Poplar-road for the U.D.C. :—

*R. & D. Swinford, Woking	£936 4 3

LEEDS.—For the erection of a new temperance hall at Rawdon, for the Temperance Council. Messrs. Braithwaite & Jackman, Architects, South Parade, Leeds :—

*L. Harpham, Leeds.

LEEDS.—For the erection of new agricultural departments block at the University of Leeds fronting University-road. Mr. Paul Waterhouse, Architect, London :—

*Armitage & Hodgson, Leeds.

LEEDS.—For the erection of a new telephone exchange at Chapeltown, for the Commissioners of H.M.O.W. :—

*Arthur Mitchell, Ltd., Leeds—*Construction*.
*Tunstalls' Rock Asphalte Co., Leeds—*Asphalter*.

LEEDS AND LIVERPOOL CANAL.—Eleven tenders were submitted for construction of a ferro-concrete bridge over the Leeds and Liverpool Canal, in Carr-road :—

*Yorkshire Hennibique Contracting Co., Ltd.

MANCHESTER.—Tenders accepted by the Corporation :—

For patent combined charging and discharging machine, for Bradford Gas Works: *Messrs. Drakes, Ltd., Halifax.
For 12 in. solid drawn steel tubes and special castings: *The Engineering Supplies Co., Ltd., London.
For supply of galvanised pipes, &c., to the Elm-street Cold Air Stores: *H. B. White & Co., Manchester.
Steelwork, &c.: *Hall & Pickles, Ltd., Manchester.
For removal and re-erection of footballers' hut in Heaton Park: *Forshaw & Co., Manchester.
For supply of pitch and creosote oil: *Hardman & Holden, Ltd., Manchester.
For draining, curbing and flagging (artificial flags), and paving with granited rock asphalte, various roads in Levenshulme and Withington: *Bethel & Son, Bale.
For draining, curbing and flagging (natural flags), and paving grit sets, Ford-street and Orchard-street, Burnage: *Thomas Wilson, Pendleton.
For draining, curbing, paving, &c., passages behind Ford-street and Orchard-street, Burnage; and Mount-road and Balmoral-road, Gorton: *G. Clark & Son, Hulme.
Supply of ironwork for twelve months: *H. Hughes & Sons, Fallsworth.
For electric light installation at Davyhulme Sewage Works: *Hall & Stinson, Ltd., Sheffield.
For supply, delivery, and erection of double sand-drying apparatus at Hyde-road Depot: *Vickers, Ltd., London.
For supply of vacuum cleaner for cleaning tram cars: *Dod Bros., Manchester.
Special track work (Contract No. 23): *The United States Steel Products Co., Ltd., London.
Welsh granite setts: *Penmaenmaur and Welsh Granite Co., Ltd., Liverpool.
Welsh granite setts (subject to approval of samples in bulk): *H. Griffith, Blaenau, Festiniog.
Norwegian granite setts: *Isherwood Bros., Ltd., Manchester.
For alterations to dwellings, &c., at Pollard-street Fire Station: *W. Richardson & Co., Manchester.
For electric light installation at houses on following estates—Blackley, Clayton, and Catterick Hall: *W. Spreadborough, Manchester; Newton Heath; *E.L. Beilhouse, Manchester; Anson: *J. V. Pyatt, Manchester.
Construction of ducts for hot-water supply, Blackley Estates: *Geo. Longden & Son, Ltd., Swinton.

MELTON MOWBRAY.—For constructing large reservoir, storage tank, new high level tower and tank, and other appurtenant works, for Waterworks. Messrs. W. R. Radford, of Nottingham, are the Council's consulting engineers :—

*The Monnoyer British Construction Co., Ltd.

MILL HILL (SUNDERLAND).—For the construction of the Mill Hill reservoir, the larger of two service reservoirs to be built for the Sunderland & South Shields Water Co. The reservoir will hold 12,000,000 gallons, and will be completed early in 1925 :—

*Erims. & Co., Ltd., Westminster.

NELSON.—For a reinforced concrete retaining wall at Brierfield Works, for Nelson Corporation (six tenders were received) :—

*Simplex Pipes, Ltd., London.
Steam roller for tarmacadam road :
*Aveling & Porter, Rochester.

NEWBIGGIN.—For erection of 20 houses, for the U.D.C. :—

*J. T. Bell £7,086

OAKHAM (RUTLAND).—For the erection of Rutland Cottage Hospital (memorial to officers and men of the county who fell in the Great War) :—

*Higgs & Sons, Oakham £7,099

ROMSEY.—For repairs and alterations at Council School, for the Southampton C.C. :—

*W. G. Chivers & Sons £457

ROTHERHAM.—For the erection of two houses on the East Dere Estate, for the T.C. :—

*Hanwell & Co., Rotherham..... £1,050

SALFORD.—For extensions to Adelphi Iron Works, Salford, for Sir James Farmer & Sons. Messrs. Wood & Sellers, architects, 78, King-street, Manchester :

*J. Gerrard & Sons (1920), Ltd., Swinton.

SOMERTON (NEWPORT).—For the erection of 38 new houses at Somerton, Newport, for the Corporation :—

*Unit Construction Co., Ltd. £14,120 15

STAFFORDSHIRE.—For completion of administrative block at Prestwood House Sanatorium, for the Staffordshire, Wolverhampton and Dudley Joint Committee for Tuberculosis :—

*J. E. Tooby, Wolverhampton..... £7,649

STAFFORDSHIRE.—For installation of electric light at Groundslow Sanatorium, for the Committee :—

*Smith & Bellhouse, Wolverhampton.. £575

WAKEFIELD.—For the erection of new block at St. John's Nursing Home. Mr. W. Harold Watson, Architect, Barstow-square, Wakefield :—

*W. Kitson & Son—*Mason.*
*M. Broadhead—*Joiner and Carpenter.*
*M. Sedgwick—*Slater.*
*W. Gillott—*Plumber*
*T. Senior—*Plasterer.*
All of Wakefield.

WAKEFIELD.—For the erection of two houses in Aberford-road, for Messrs. Massie & Holdsworth :—

*J. Lazenby—*Builder and Joiner.*
*H. Gillott—*Plumber.*
*T. E. Senior—*Plasterer.*
*C. Turner & Son—*Painter.*
All of Wakefield.

WAKEFIELD.—For the erection of bungalow at Chapelthorpe, for Messrs. Massie & Holdsworth :—

*J. Marshall & Son—*Builder.*
*W. Bramald—*Joiner.*
*T. E. Senior—*Plasterer.*
*J. E. Crossley—*Plumber.*
*C. Turner & Son—*Painter.*
All of Wakefield.

WANTAGE.—For repairs to roof of Victoria Cross Gallery, for the U.D.C. :—

*British Challenge Glazing Co.....£230

YORK.—For the erection of 50 houses at Tang Hall Estate, for the Housing Committee :—

*J. Gleeson, Sheffield £18,937

Adelaide House.

In the advertisement of Messrs. Scaffolding (Great Britain), Ltd., on page ix of our issue of August 10, the name of the contractors under the block showing the heavy suspended scaffold at Adelaide House was inadvertently given as Messrs. John Mowlem & Co., Ltd. This should, of course, have read Sir Robert McAlpine & Sons.

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